

SCD-XB940

SERVICE MANUAL

Ver 1.1 2002.05

AEP Model
UK Model



Photo: Black type

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM55B-DVBU3
Base Unit Name	DVBU3
Optical Pick-up Name	KHM-220AAA/J1N

SPECIFICATIONS

When a super audio CD is played

Playing frequency range	2 Hz to 100 kHz
Frequency response	2 Hz to 50 kHz (–3 dB)
Dynamic range	103 dB or more
Total harmonic distortion rate	0.0015 % or less
Wow and flutter	Value of measurable limit (± 0.001 % W. PEAK) or less

When a CD is played

Frequency response	2 Hz to 20 kHz
Dynamic range	99 dB or more
Total harmonic distortion rate	0.002 % or less
Wow and flutter	Value of measurable limit (± 0.001 % W. PEAK) or less

Output connector

	Jack type	Output level	Load impedance
ANALOG OUT	Phono jacks	2 Vrms (at 50 kilohms)	Over 10 kilohms
DIGITAL OUT CD OPTICAL*	Square optical output connector	–18 dBm	(Light emitting wave length: 660 nm)
DIGITAL OUT CD COAXIAL*	Coaxial output connector	0.5 Vp-p	75 ohms

*Output only the audio signals of the CD

– Continued on next page –

SUPER AUDIO CD PLAYER

SONY®

General

Laser radiant power:	5.47 uW at 650 nm
*These output is the value measured at a distance of about 200mm from the objective lens surface on the optical pick-up.	
Power requirements	230 V AC, 50/60 Hz
Power consumption	30 W
Dimensions (w/h/d)	430 × 115 × 290 mm incl. projecting parts
Mass (approx.)	5.5 kg

Supplied accessories

- Audio connecting cord (phono jack × 2 ↔ phono jack × 2) (1)
- Remote commander (remote) RM-SX90 (1)
- R06 (size-AA) batteries (2)

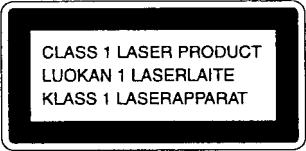
Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!
COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

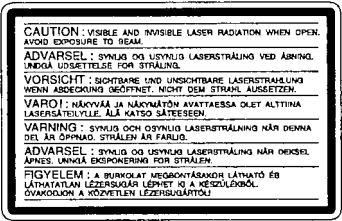
CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This appliance is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.



The following caution label is located inside the unit.



Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

TABLE OF CONTENTS

1. SERVICING NOTES	4
2. GENERAL	5
3. DISASSEMBLY	8
4. DIAGRAMS	
4-1. Notes for Printed Wiring Board and Schematic Diagram	11
4-2. Printed Wiring Board – TK Board –	12
4-3. Schematic Diagram – TK Board –	13
4-4. Printed Wiring Board – MAIN Board (Component Side) –	14
4-5. Printed Wiring Board – MAIN Board (Conductor Side) –	15
4-6. Schematic Diagram – MAIN Board (1/6) –	16
4-7. Schematic Diagram – MAIN Board (2/6) –	17
4-8. Schematic Diagram – MAIN Board (3/6) –	18
4-9. Schematic Diagram – MAIN Board (4/6) –	19
4-10. Schematic Diagram – MAIN Board (5/6) –	20
4-11. Schematic Diagram – MAIN Board (6/6) –	21
4-12. Printed Wiring Board – AUDIO Board –	22
4-13. Schematic Diagram – AUDIO Board –	23
4-14. Printed Wiring Board – HP Board –	24
4-15. Schematic Diagram – HP Board –	24
4-16. Printed Wiring Board – LOADING Board –	25
4-17. Schematic Diagram – LOADING Board –	25
4-18. Printed Wiring Board – DISPLAY Board –	26
4-19. Schematic Diagram – DISPLAY Board –	27
4-20. Printed Wiring Board – POWER Board –	28
4-21. Schematic Diagram – POWER Board –	29
4-22. Printed Wiring Boards – AC SW/TRANSFORMER Boards –	30
4-23. Schematic Diagram – AC SW/TRANSFORMER Boards –	31
5. EXPLODED VIEWS	36
6. ELECTRICAL PARTS LIST	40

SECTION 1 SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

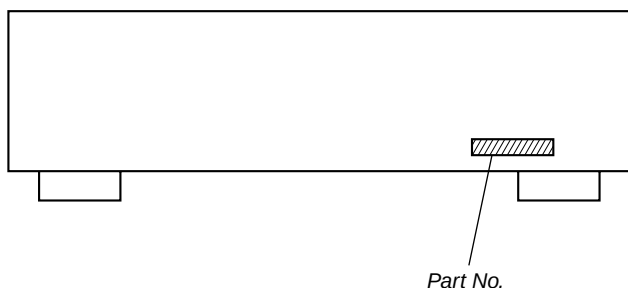
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

MODEL IDENTIFICATION

– Back Panel –



Model	Part No.
AEP	4-227-711-0□
UK	4-227-711-1□

ABOUT THE “E01” DISPLAY

“E01” is displayed when the above occurs in communication with a system controller (IC605) and a display controller (IC203) at the time of starting.

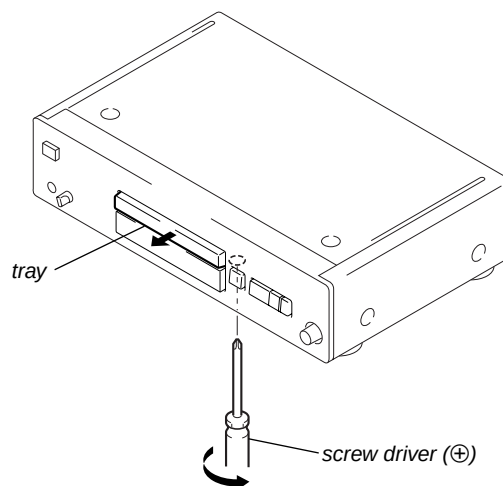
In this case, please check soldering, disconnection, etc. of each IC.

HOW TO OPEN THE TRAY WHEN POWER SWITCH TURNS OFF

There are two different methods to open the tray.

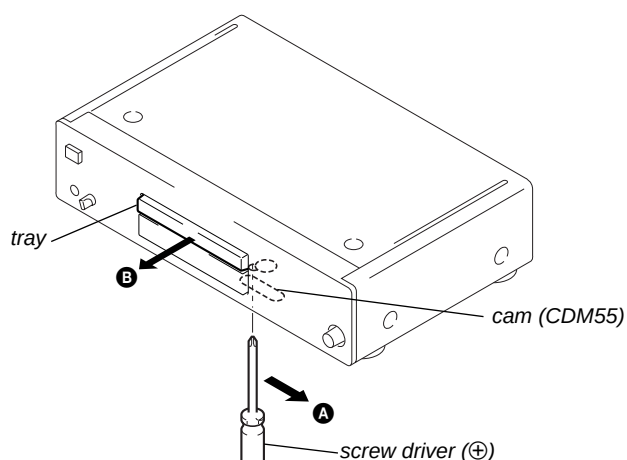
• Method-1

Insert a screw driver (⊕) into the aperture of the unit bottom, and turn it in the direction of the arrow (to OUT direction).



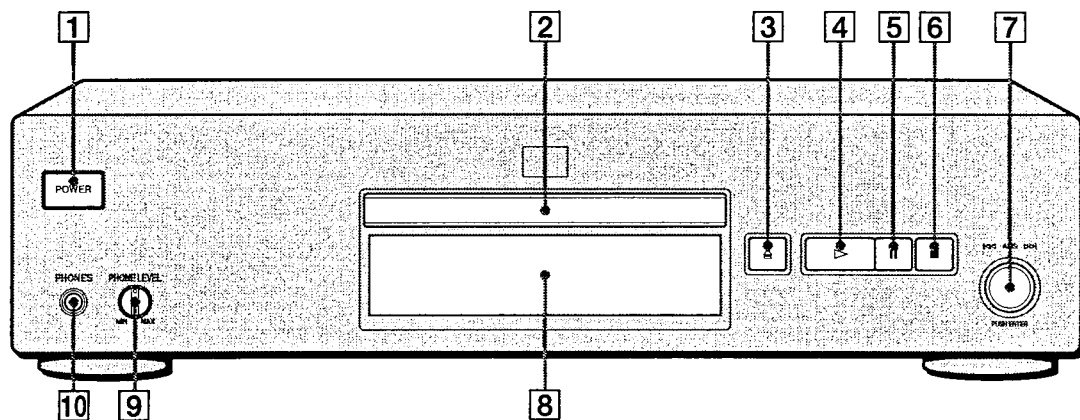
* To close the disc table, turn the screw driver (⊕) in the reverse direction (to IN direction).

• Method-2



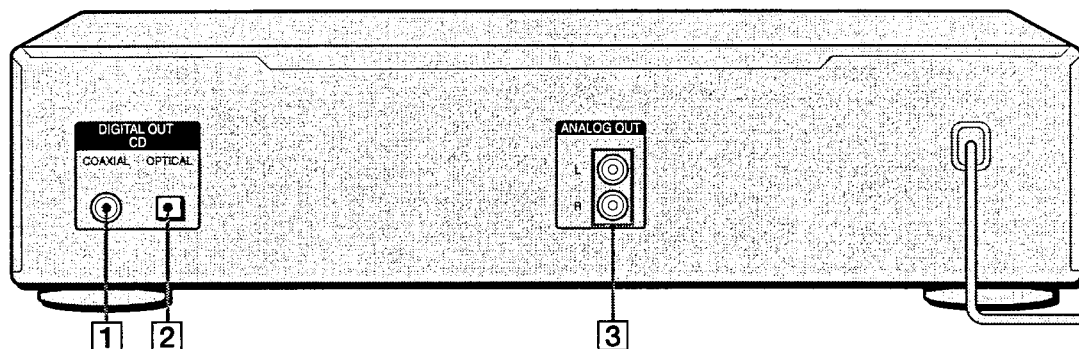
- ① Insert a screw driver (⊕) into the aperture of the unit bottom, and move the cam (CDM55) in the direction of arrow **A**.
- ② Pull the tray in the direction of arrow **B**.

Front Panel Parts Descriptions



- | | | |
|--|--|---|
| <p>1 POWER switch (11)
Press to turn on the player.</p> <p>2 Disc tray (11)
Press $\triangle$ to open/close the disc tray.</p> <p>3 $\triangle$ button (11)
Press to open the disc tray.</p> <p>4 $\triangleright$ button (11)
Press to start play.</p> <p>5 $\parallel$ button (11)
Press to pause play.</p> | <p>6 ■ button (11)
Press to stop play.</p> <p>7 $\ll$AMS$\gg$ controller (AMS: Automatic Music Senser) (11)
Each time you press $\ll$, you go back to the preceding track; each time you press $\gg$, you go to the succeeding track.</p> <p>8 Display window (12)
Shows various information.</p> | <p>9 PHONE LEVEL
Adjust the headphones volume.</p> <p>10 PHONES
Connect the headphones.</p> |
|--|--|---|

Rear Panel Parts Descriptions



- 1 DIGITAL OUT CD COAXIAL connector (5)**
Connect to an audio component using the coaxial digital cable.
- 2 DIGITAL OUT CD OPTICAL connector (5)**
Connect to an audio component using an optical digital cable.
- 3 ANALOG OUT jacks (5)**
Connect to an audio component using the audio connecting cord.

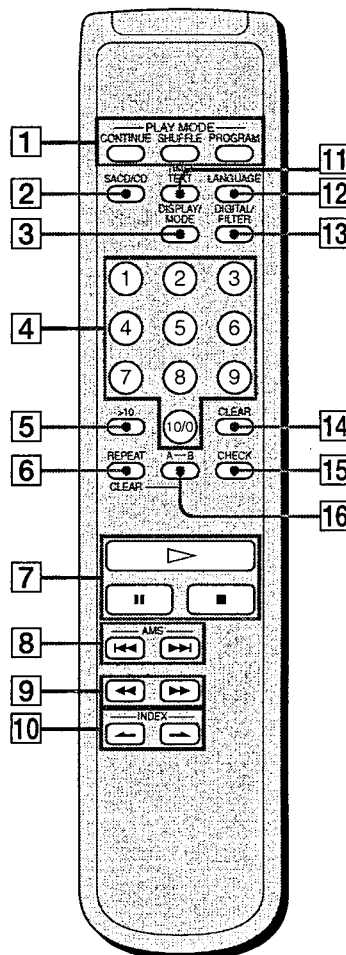
Note

Only the audio signals of the CD can be output from the DIGITAL OUT CD connectors shown in 1 and 2. Those of the Super Audio CD cannot be output through DIGITAL OUT CD.

Remote Parts Descriptions

- 1 CONTINUE button (17)**
Press to resume normal play from Shuffle Play or Programme Play.
- SHUFFLE button (17)**
Press to select Shuffle Play.
- PROGRAM button (17)**
Press to select Programme Play.
- 2 SACD/CD button (11)**
Each time you press the button, "SACD" or "CD" appears in the display. Select the type of CD you want to play.
- 3 DISPLAY MODE button (12)**
Press to turn off the information.
- 4 Number buttons (14)**
Press to enter the track numbers.
- 5 >10 button (14)**
Press to locate a track numbered over 10.
- 6 REPEAT button (16)**
Press repeatedly to play all tracks or only one track on the disc.
- 7 ▷ button (11)**
Press to start play.
- II button (12)**
Press to pause play.
- button (12)**
Press to stop play.
- 8 AMS ◀◀/▶▶ (AMS: Automatic Music Sensor) buttons (14)**
Press to locate a specific track.
- 9 ◀◀/▶▶ buttons (15)**
Press to locate a portion you want to play within a track.
- 10 INDEX ◀/▶ buttons (15)**
Press to locate a specific point marked with an index signal when you play a disc that has index signals.

- 11 TIME/TEXT button (13)**
Each time you press the button, the playing time of the track and the remaining time on the disc appear in the display.
- 12 LANGUAGE button (14)**
Press to change the displayed language if the TEXT disc has several languages.
- 13 DIGITAL FILTER button (18)**
Press to select the digital filter type when a CD is played.
- 14 CLEAR button (17)**
Press to delete a programmed track number.
- 15 CHECK button (17)**
Press to check the programmed order.
- 16 A↔B button (16)**
Press to select Repeat A-B Play.



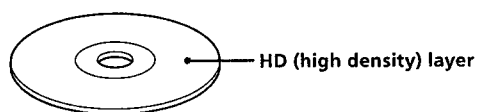
Compatible Disc Types

You can play the following discs with this player.
Depending on the type of disc to be played, select the appropriate indicator by pressing SACD/CD on the remote (pages 11).

Super Audio CD (single layer disc)

This disc consists of a single HD layer*.
Press SACD/CD repeatedly so that "SACD" appears in the display.

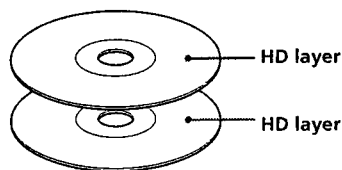
*High density signal layer for the Super Audio CD



Super Audio CD (dual layer disc)

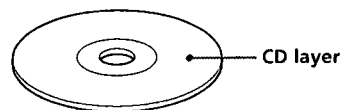
This disc consists of dual HD layers and is capable of extended play over long periods.
Press SACD/CD repeatedly so that "SACD" appears in the display.

Also, as the dual layer disc consists of dual HD layers on one side only, it is not necessary to turn the disc over.



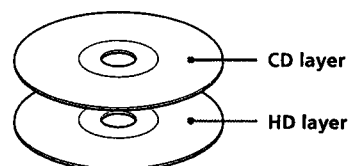
Conventional CD

This disc is the standard format.
Press SACD/CD repeatedly so that "CD" appears in the display.



Super Audio CD + CD (Hybrid disc)

This disc consists of an HD layer and a CD layer. Press SACD/CD to select the layer you want to listen to. Also, as the dual layers are on one side, it is not necessary to turn the disc over. You can play the CD layer using a conventional CD player.



Incompatible Discs

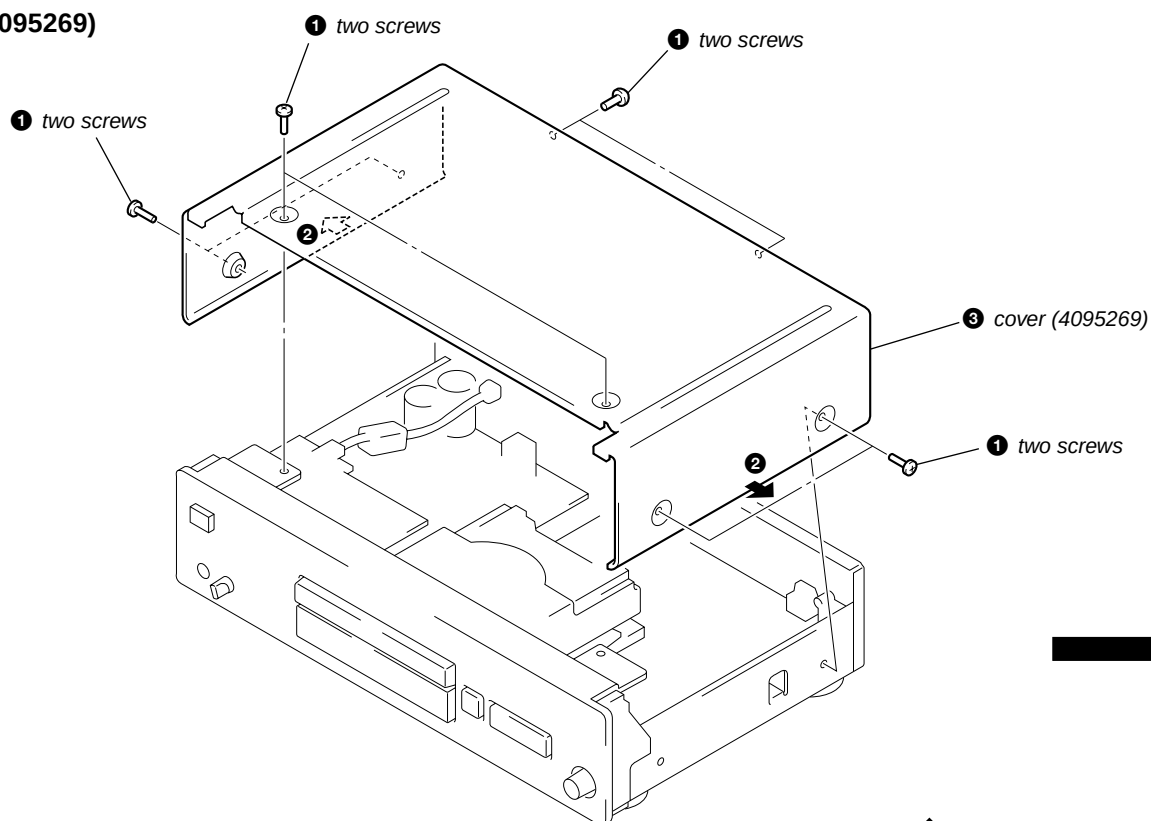
This player cannot play the following discs. If you try to play them, the error message "TOC Error" or "NO DISC" will appear or there will be no sound.

- CD-ROM
- CD-R
- CD-RW
- DVD, etc.

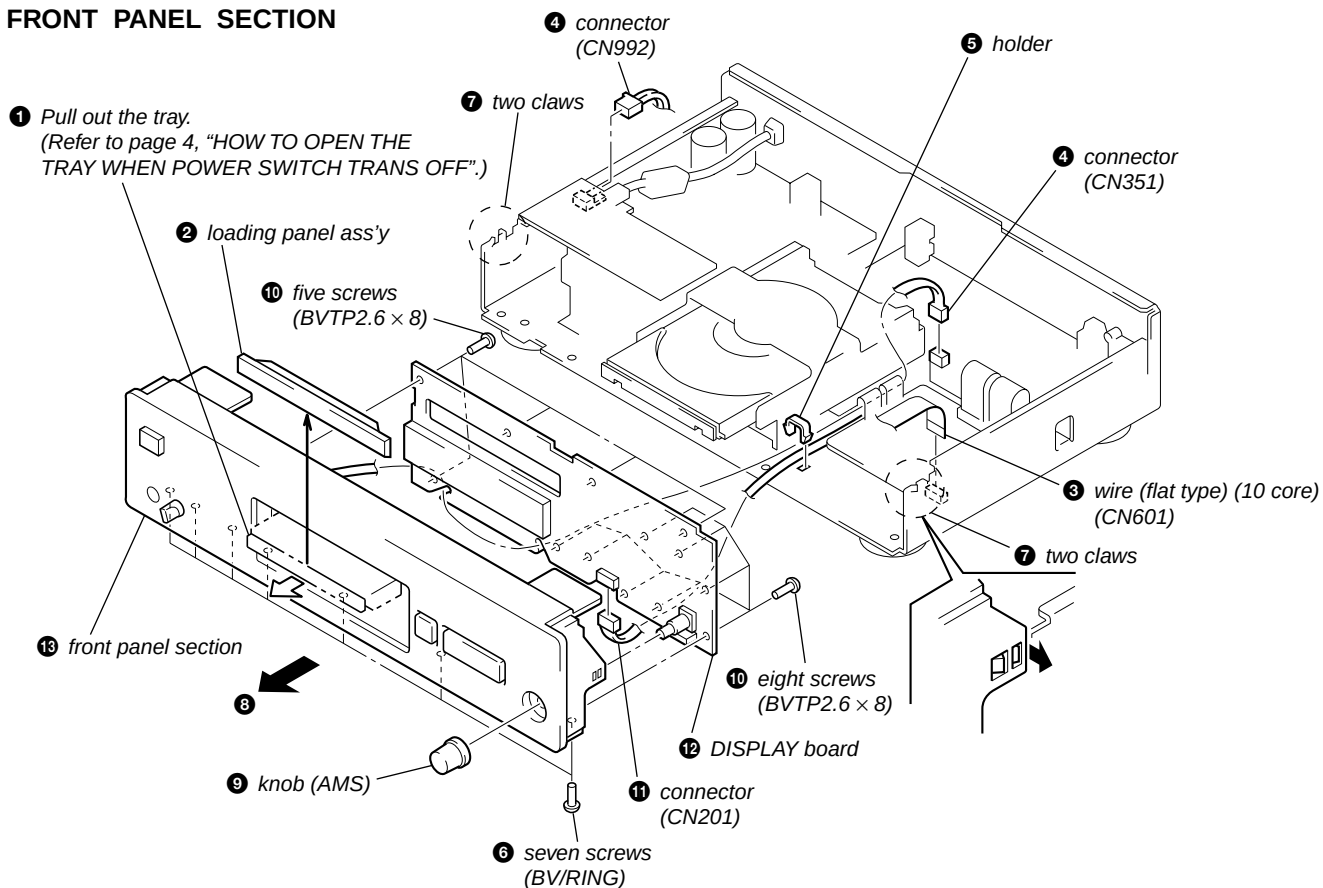
SECTION 3 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

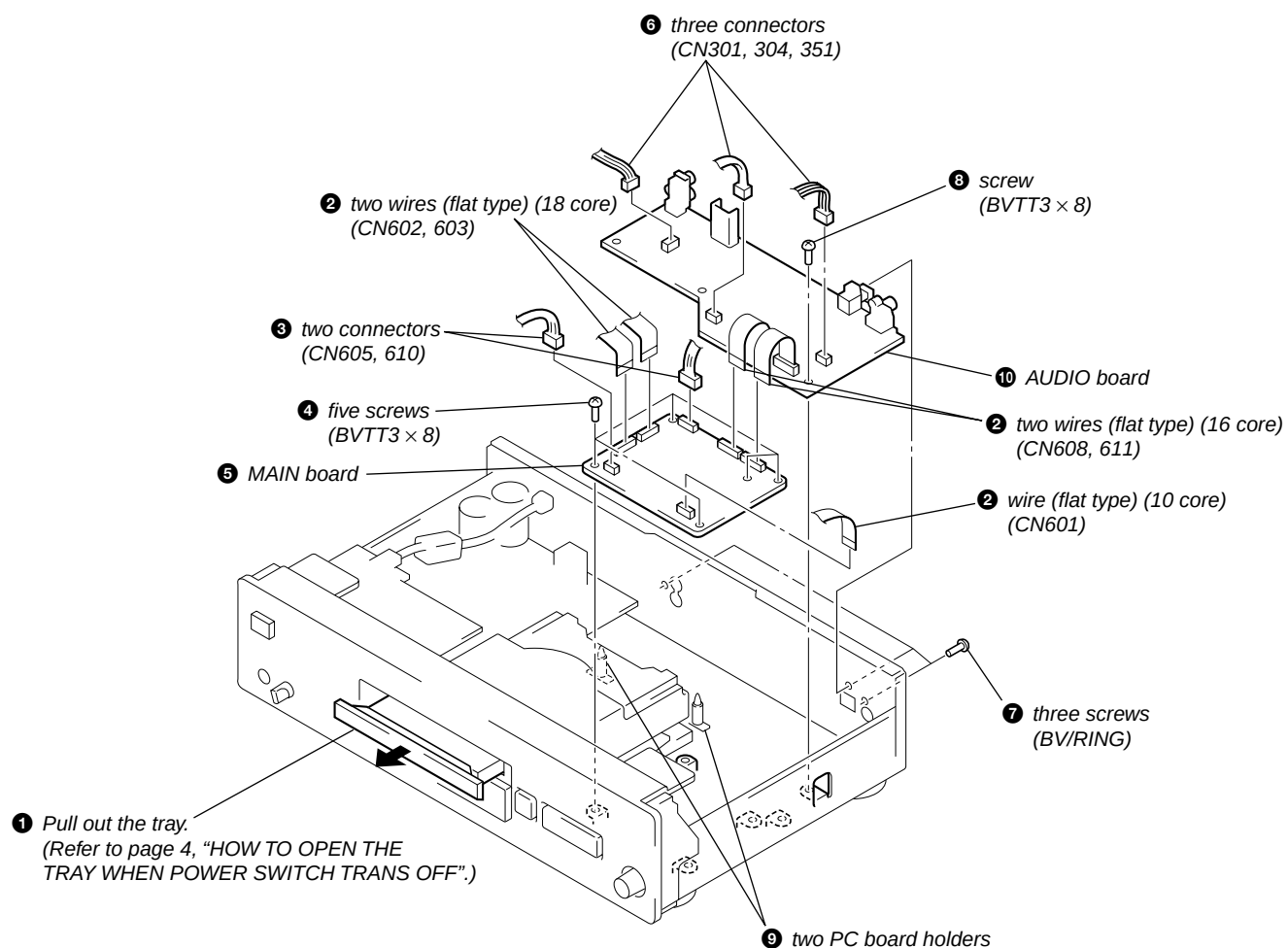
COVER (4095269)



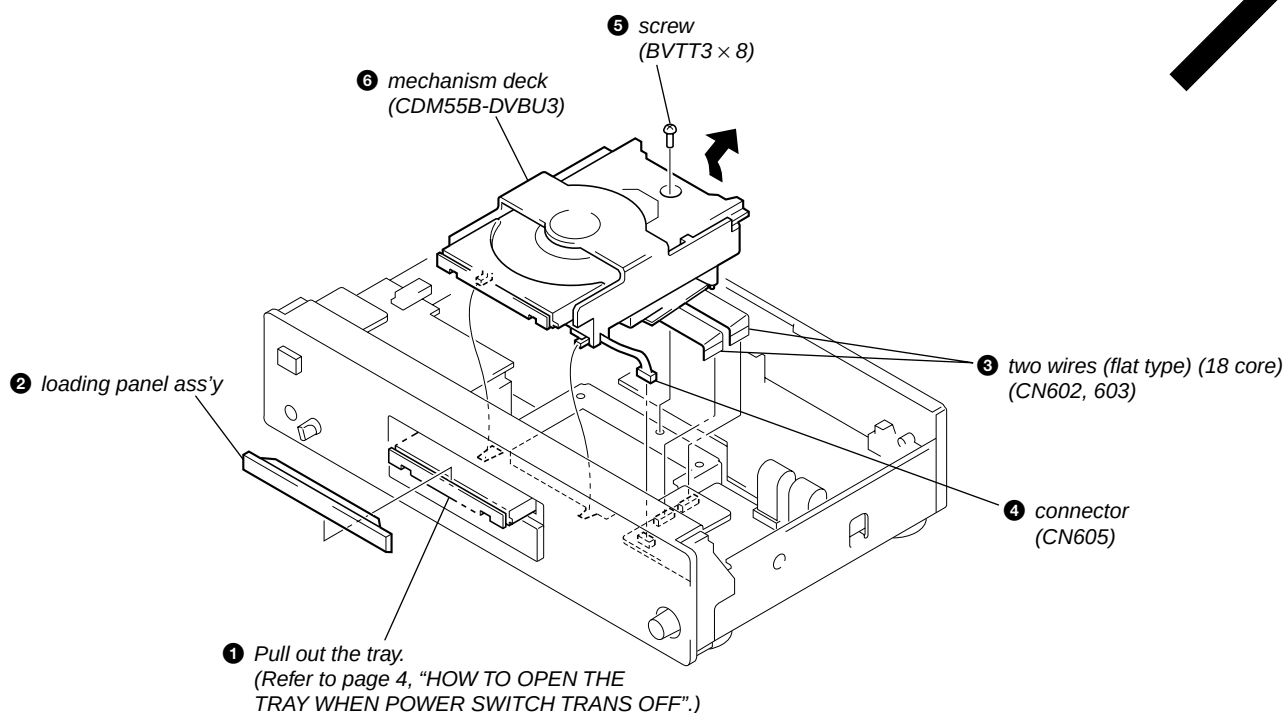
FRONT PANEL SECTION



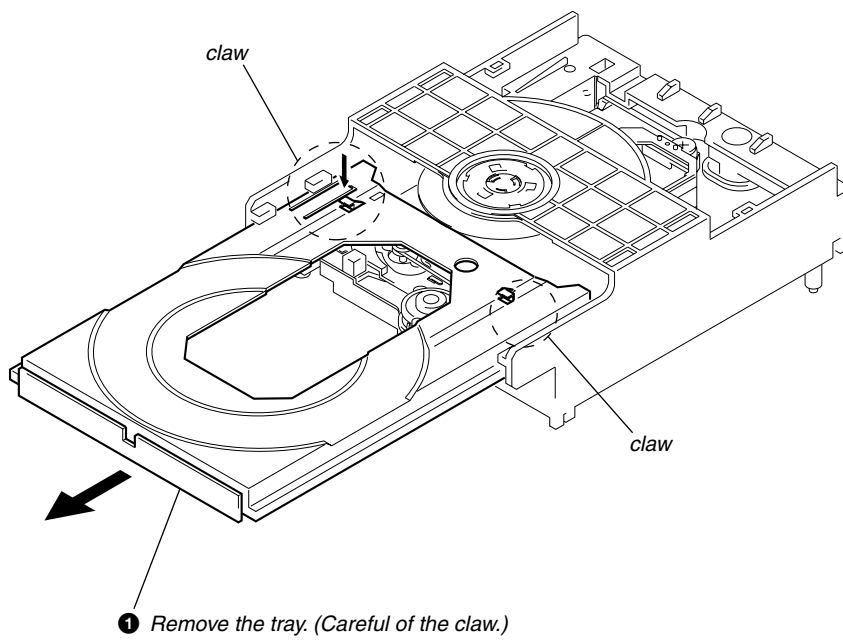
AUDIO/MAIN BOARD



MECHANISM DECK (CDM55B-DVBU3)



TRAY



SECTION 4
DIAGRAMS

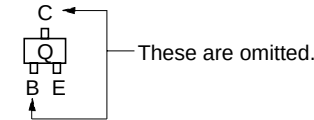
4-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : Through hole.
- ▨ : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated.)

Caution:
Pattern face side: Parts on the pattern face side seen from
(Conductor Side) the pattern face are indicated.
Parts face side: Parts on the parts face side seen from
(Component Side) the parts face are indicated.

- Main board is multi-layer printed board.
However, the patterns of intermediate-layer have not been included in the diagram.
- Indication of transistor



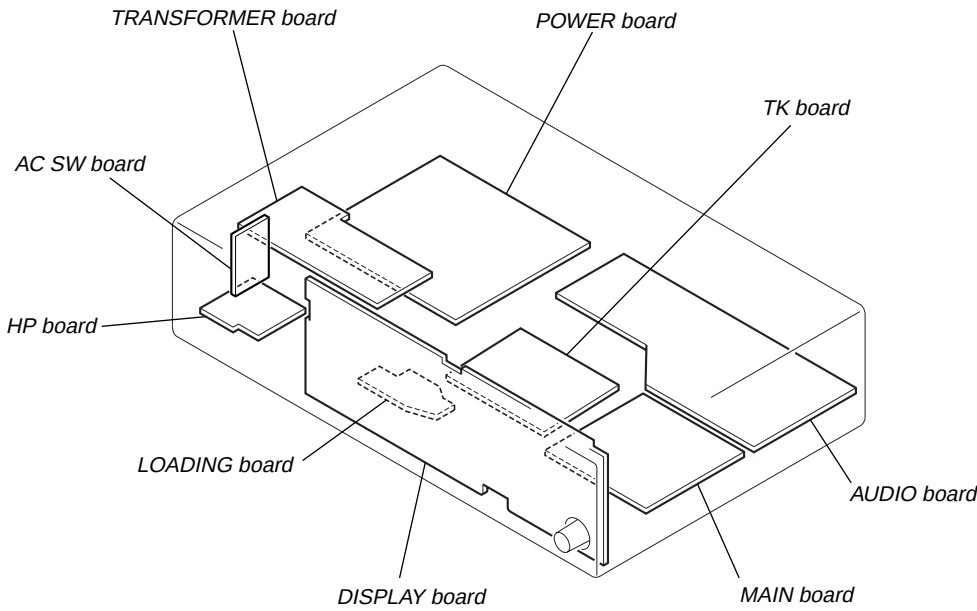
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$
50 WV or less are not indicated except for electrolytics
and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise
specified.
- Δ : internal component.
- $\text{---}\text{---}\text{---}$: fusible resistor.
- $\text{---}\text{---}\text{---}$: panel designation.

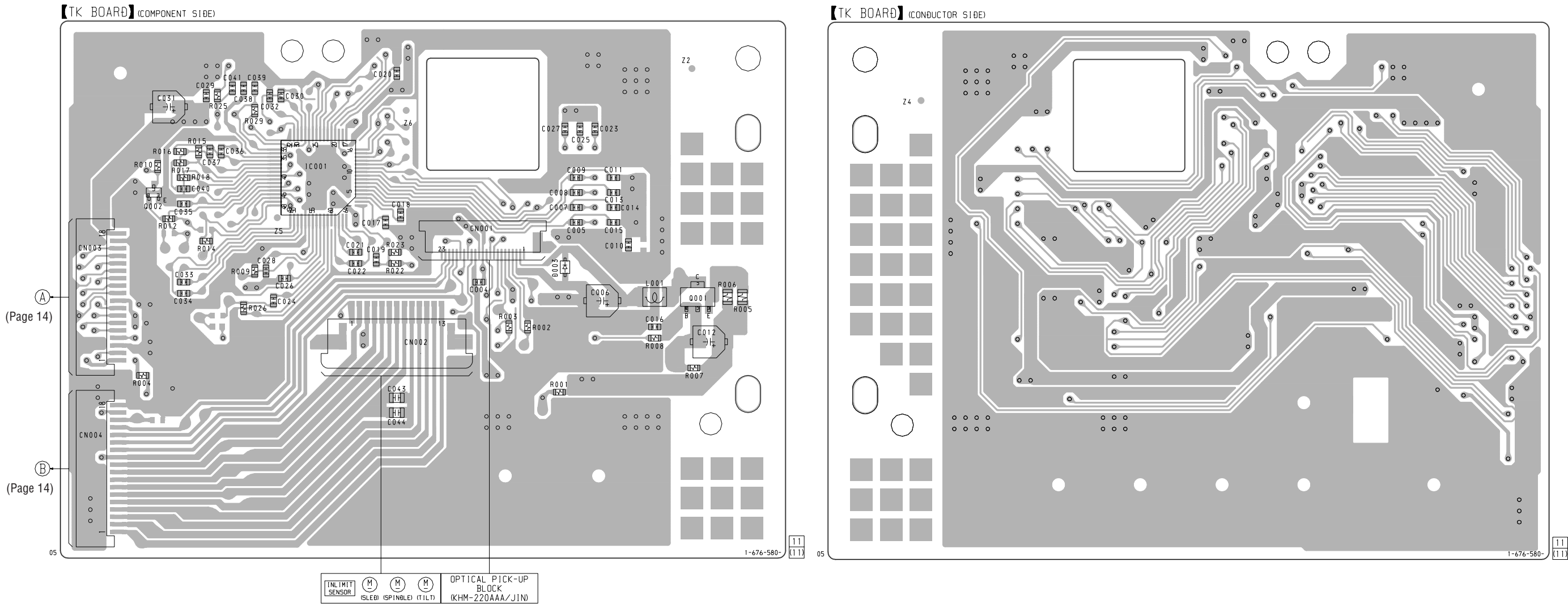
Note: The components identified by mark Δ or dotted line
with mark Δ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- B- : B- Line.
- Voltages and waveforms are dc with respect to ground
under no-signal conditions.
no mark : STOP
- Voltages are taken with a VOM (Input impedance 10 M Ω).
Voltage variations may be noted due to normal produc-
tion tolerances.
- Waveforms are taken with a oscilloscope.
Voltage variations may be noted due to normal produc-
tion tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 $\text{---}\text{---}\text{---}$: SACD
 $\text{---}\text{---}\text{---}$: CD
 $\text{---}\text{---}\text{---}$: DIGITAL OUT

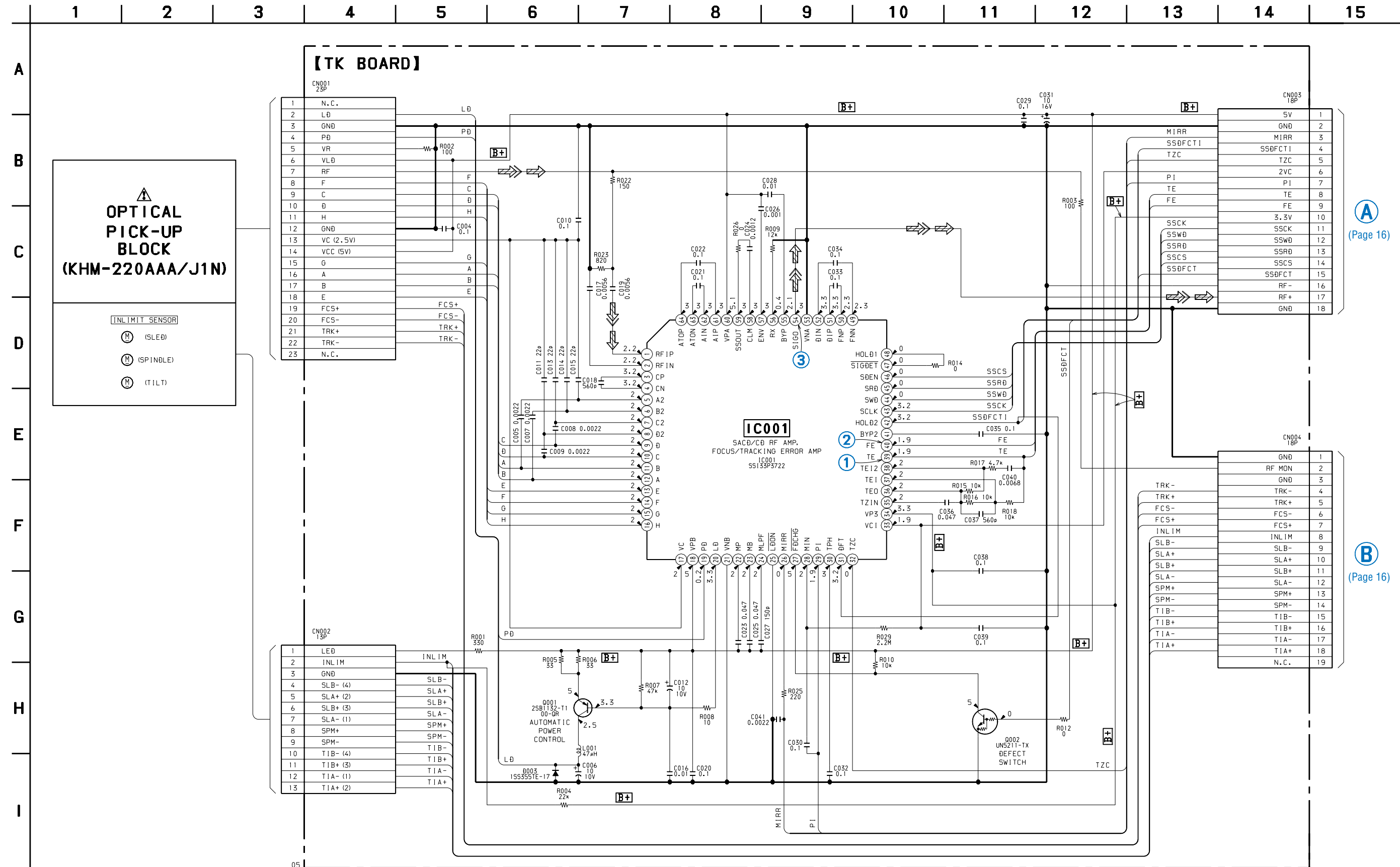
• Circuit Boards Location



4-2. PRINTED WIRING BOARD – TK Board – • See page 11 for Circuit Boards Location.



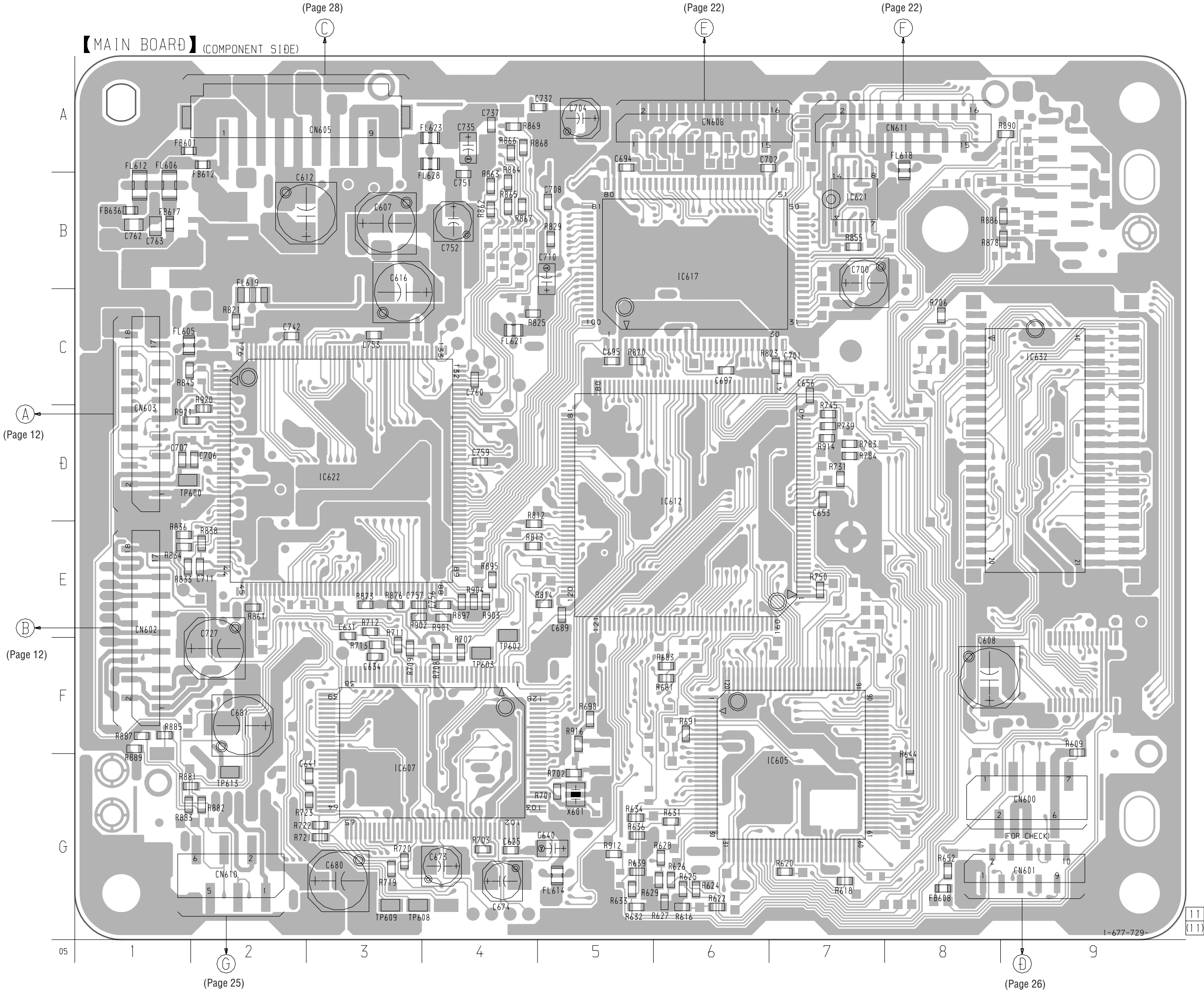
4-3. SCHEMATIC DIAGRAM – TK Board – • See page 32 for Waveforms.



4-4. PRINTED WIRING BOARD – MAIN Board (Component Side) – • See page 11 for Circuit Boards Location.

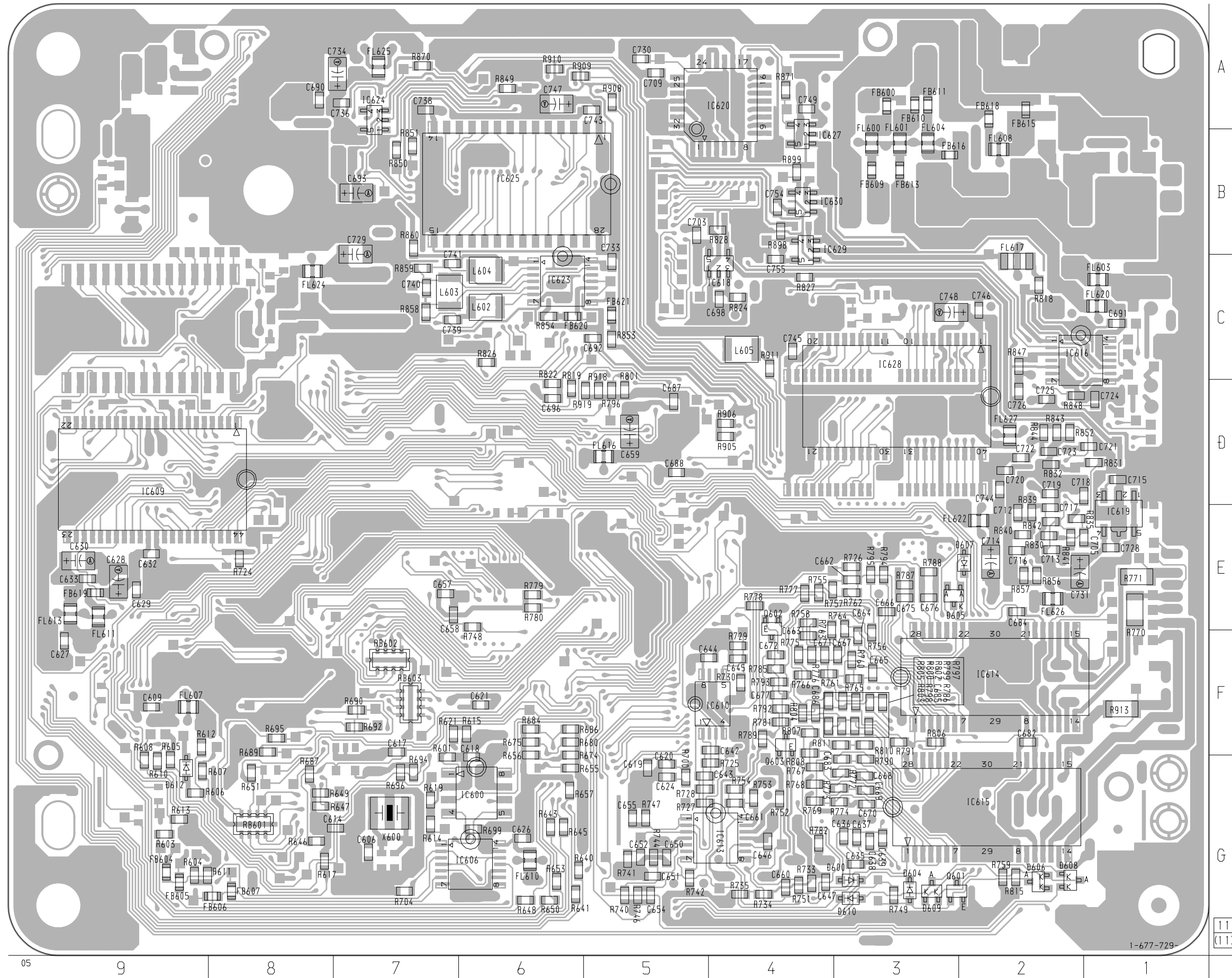
• Semiconductor Location

Ref. No.	Location
IC605	G-7
IC607	F-4
IC612	D-6
IC617	B-6
IC621	B-7
IC622	D-3
IC632	D-9



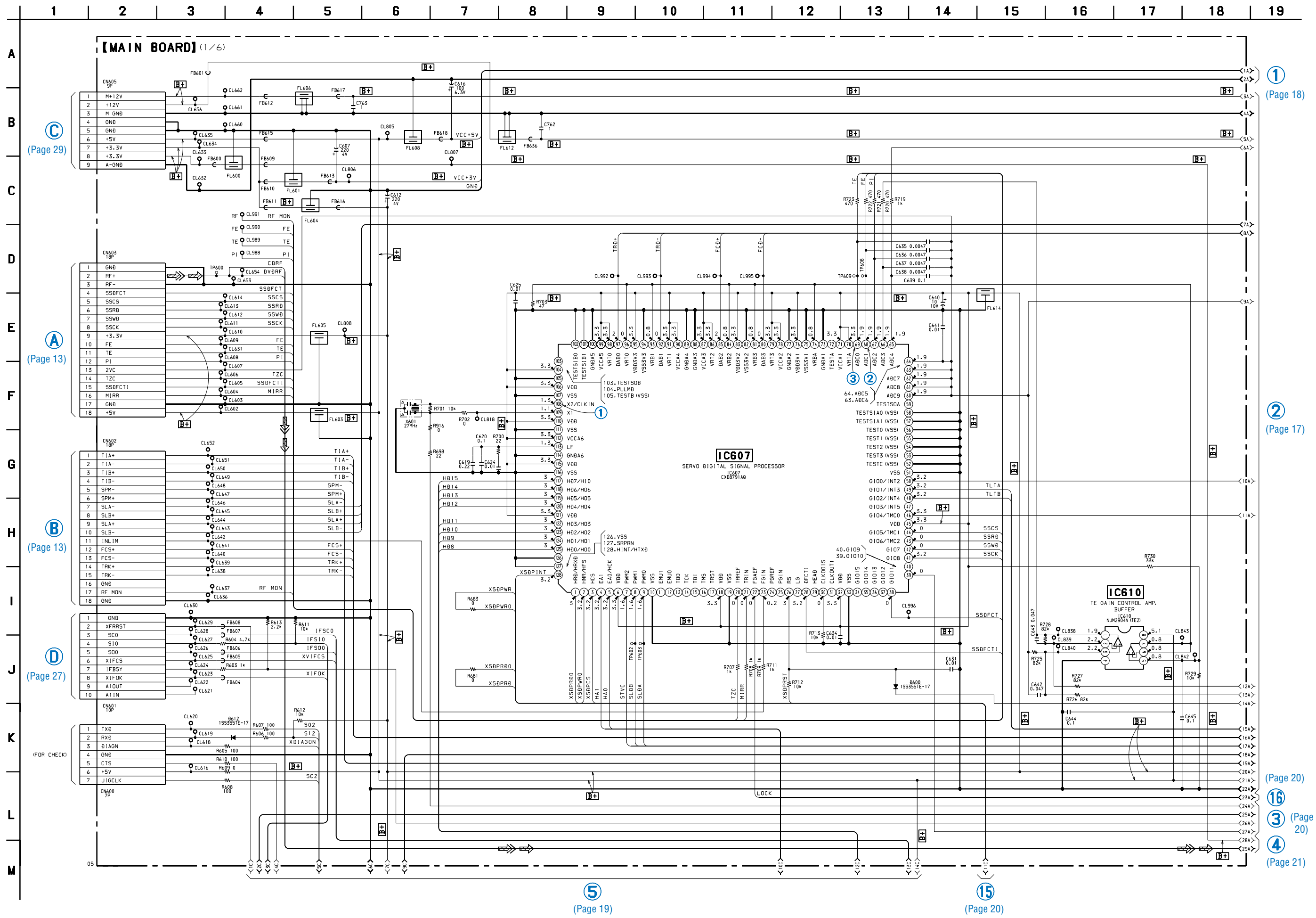
4-5. PRINTED WIRING BOARD – MAIN Board (Conductor Side) – • See page 11 for Circuit Boards Location.

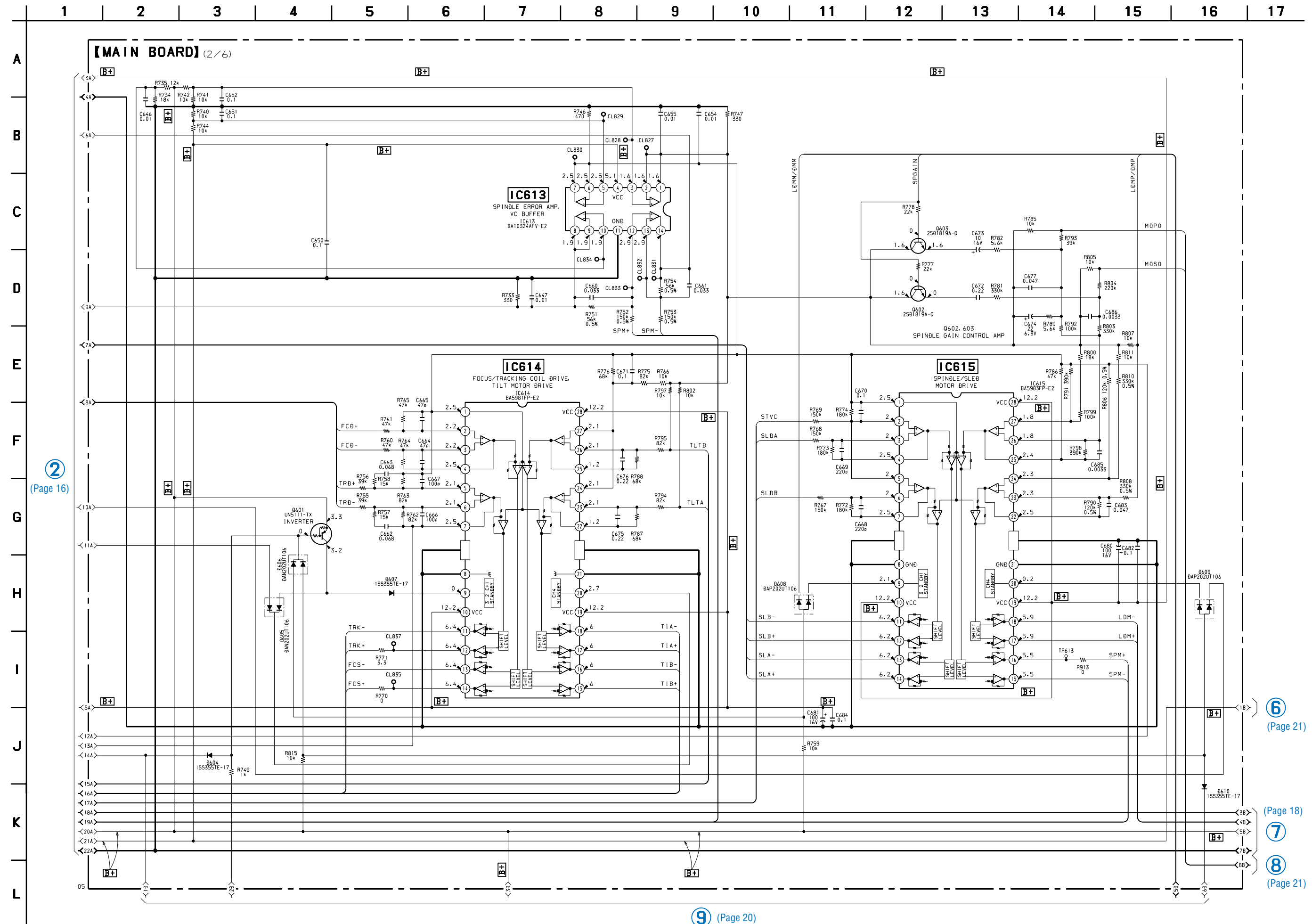
【MAIN BOARD】(CONDUCTOR SIDE)



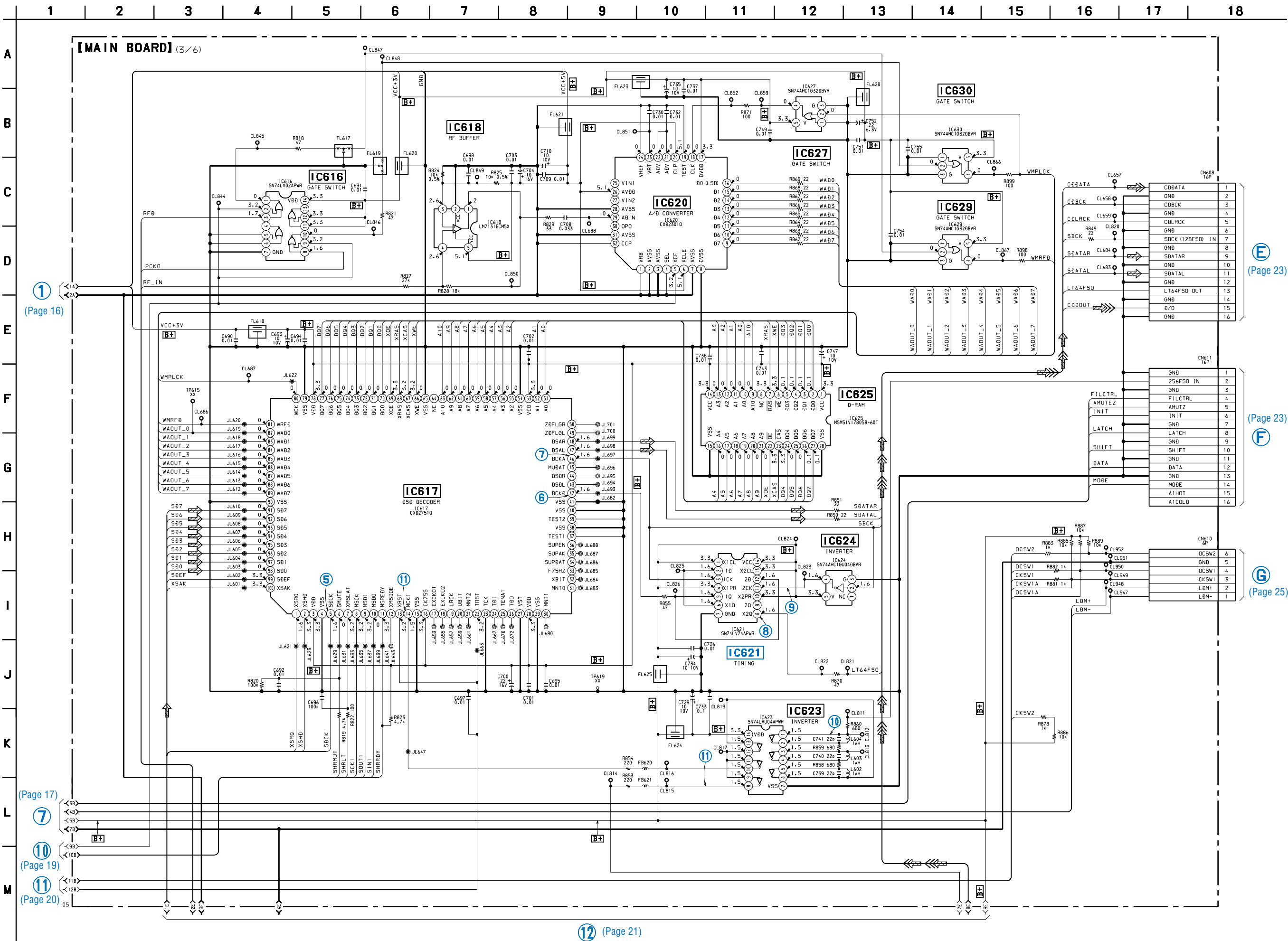
• Semiconductor Location

Ref. No.	Location
D600	G-3
D604	G-3
D605	E-3
D606	G-2
D607	E-2
D608	G-2
D609	G-3
D610	G-3
D612	G-9
IC600	G-6
IC606	G-6
IC609	D-9
IC610	F-4
IC613	G-4
IC614	F-2
IC615	G-2
IC616	C-2
IC618	C-4
IC619	E-1
IC620	A-4
IC623	C-6
IC624	A-7
IC625	B-6
IC627	B-4
IC628	D-3
IC629	B-4
IC630	B-4
Q601	G-3
Q602	E-4
Q603	F-4





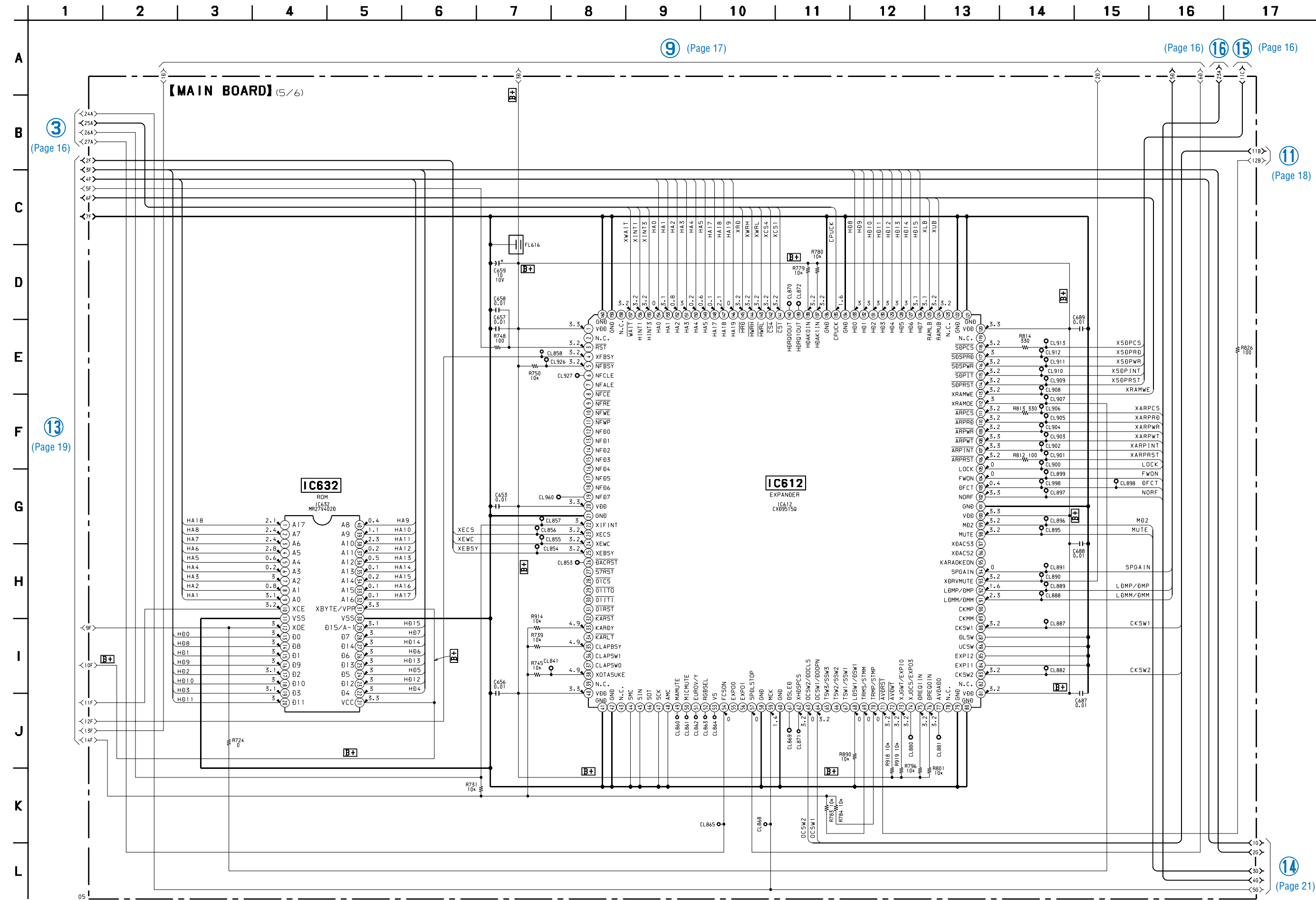
4-8. SCHEMATIC DIAGRAM – MAIN Board (3/6) – • See page 32 for Waveforms. • See page 34 for IC Block Diagram.



13
(Page 20)

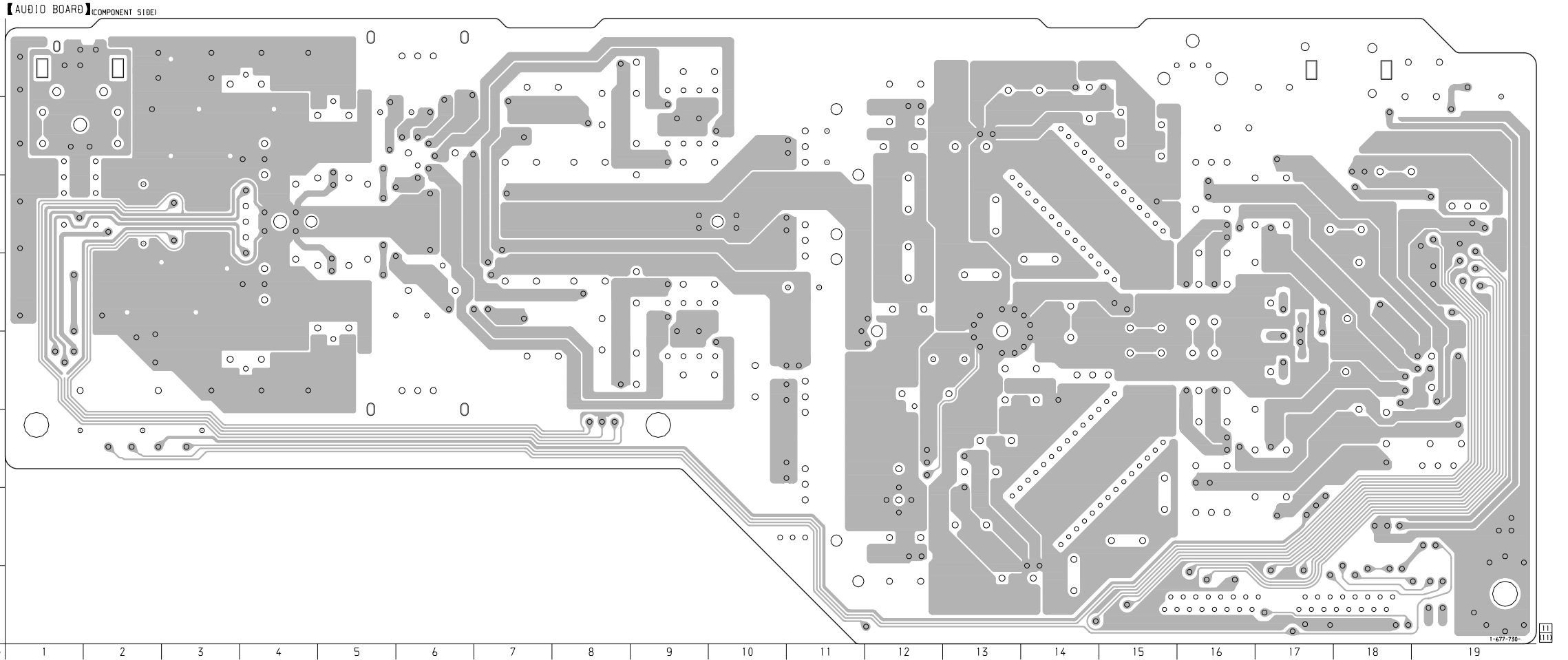


4-10. SCHEMATIC DIAGRAM – MAIN Board (5/6) –



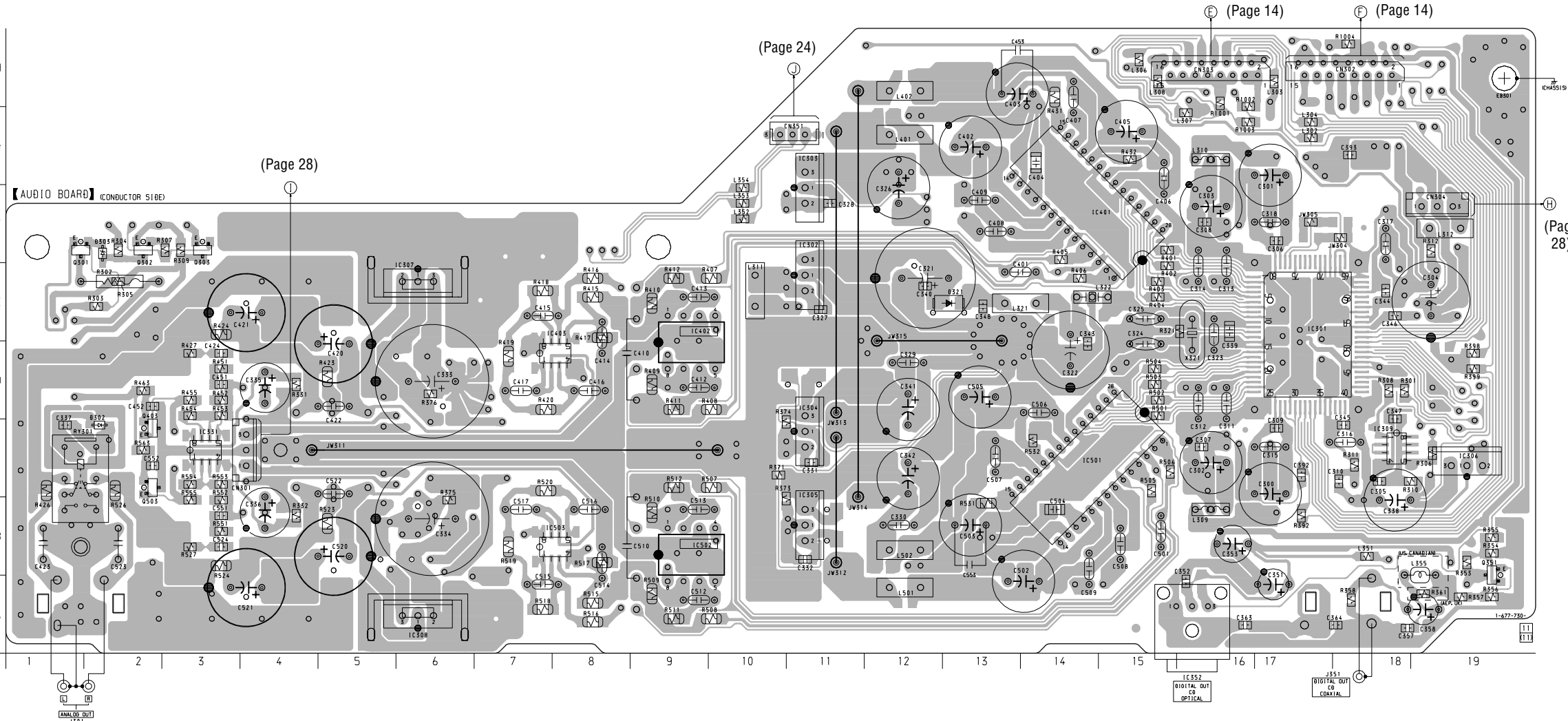


4-12. PRINTED WIRING BOARD – AUDIO Board – • See page 11 for Circuit Boards Location.

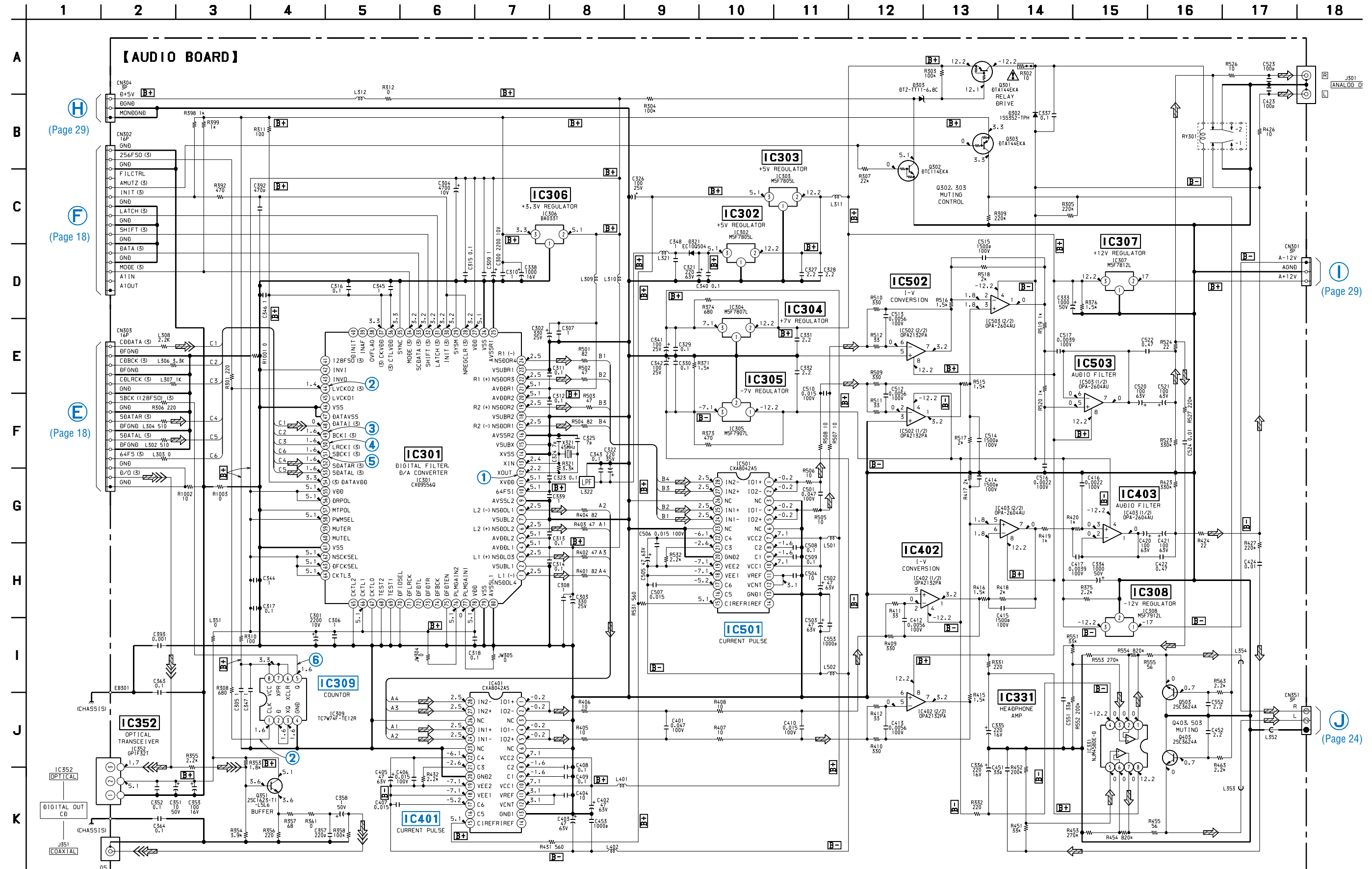


• Semiconductor Location

Ref. No.	Location
D302	C-2
D303	F-2
D321	E-13
IC301	E-17
IC302	E-11
IC303	F-11
IC304	C-11
IC305	B-11
IC306	C-19
IC307	E-6
IC308	A-6
IC309	C-18
IC331	C-3
IC352	A-16
IC401	F-15
IC402	D-9
IC403	D-7
IC501	C-14
IC502	B-9
IC503	B-7
Q301	F-1
Q302	F-2
Q303	F-3
Q351	A-19
Q403	C-2
Q503	C-2

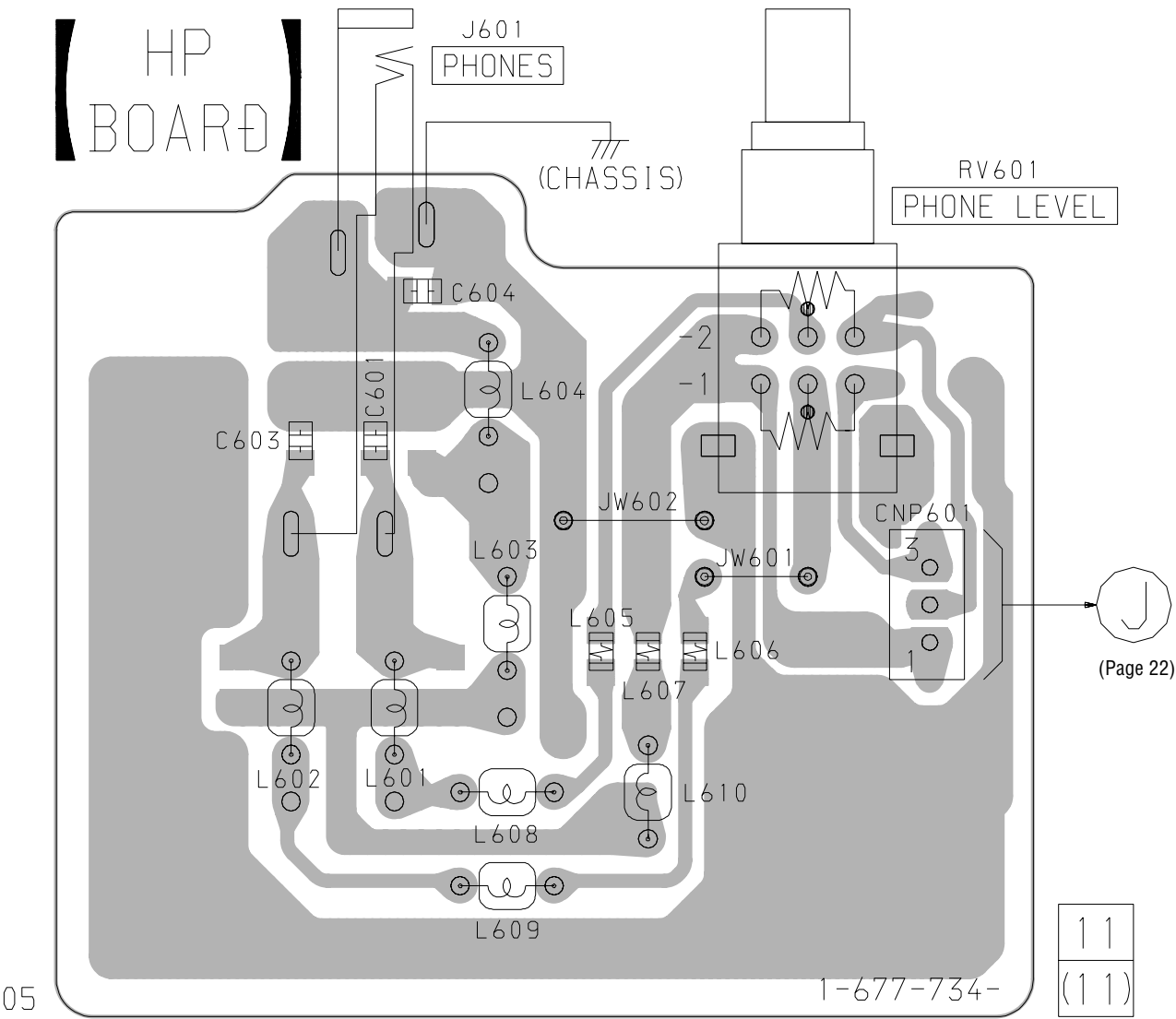


4-13. SCHEMATIC DIAGRAM – AUDIO Board – • See page 32 for Waveforms. • See page 34 for IC Block Diagrams.

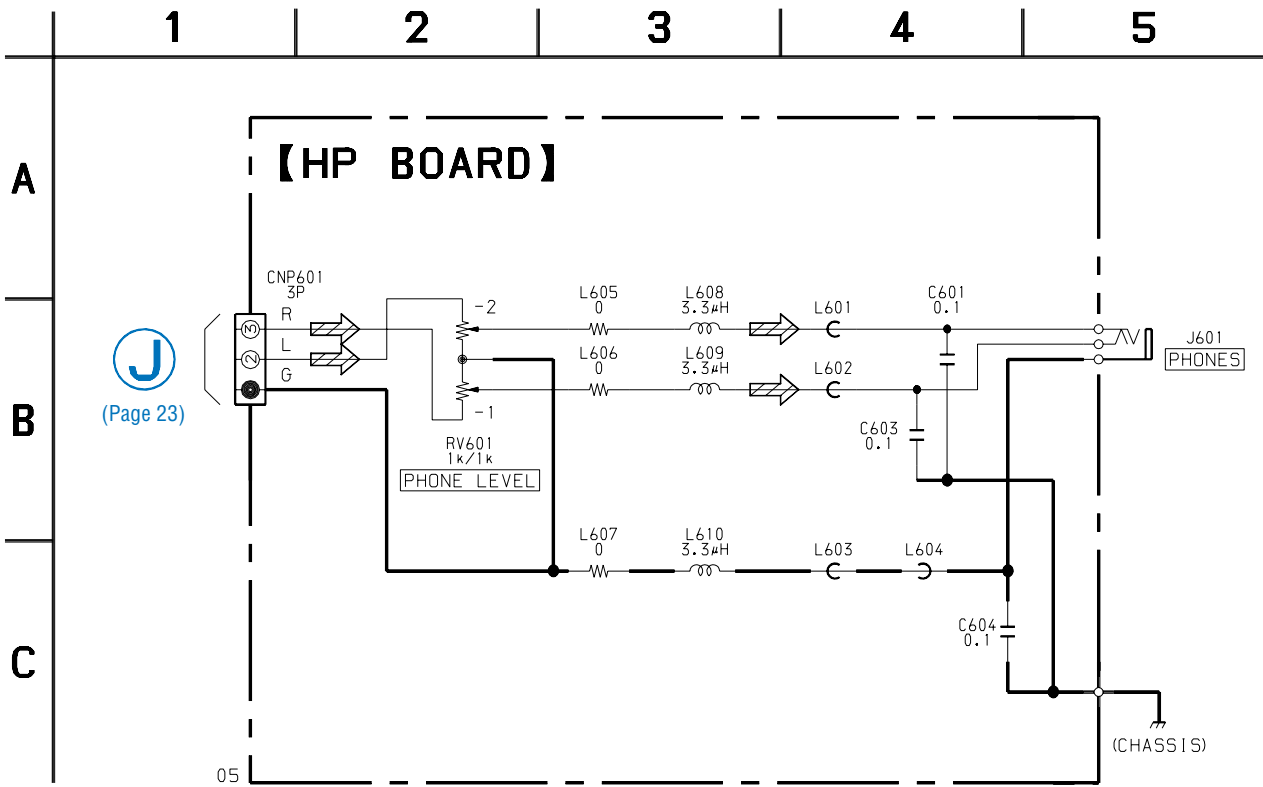


The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

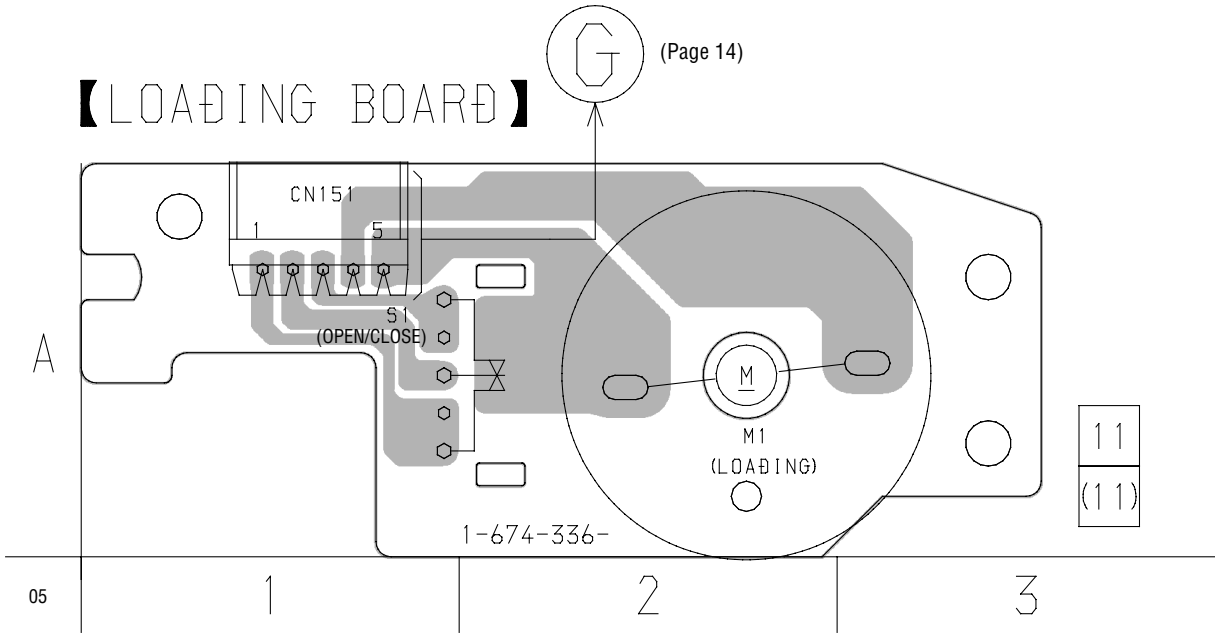
4-14. PRINTED WIRING BOARD – HP Board – • See page 11 for Circuit Boards Location.



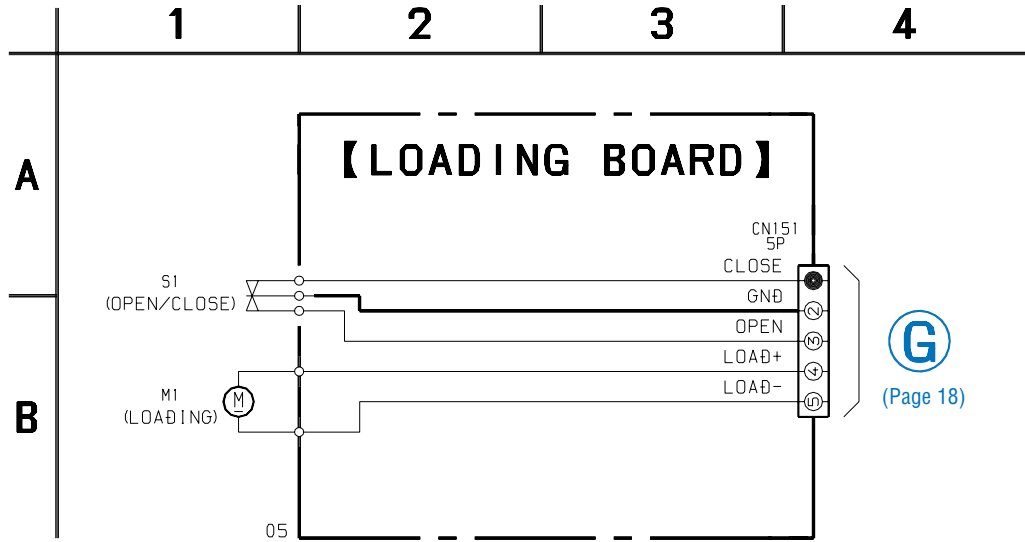
4-15. SCHEMATIC DIAGRAM – HP Board –



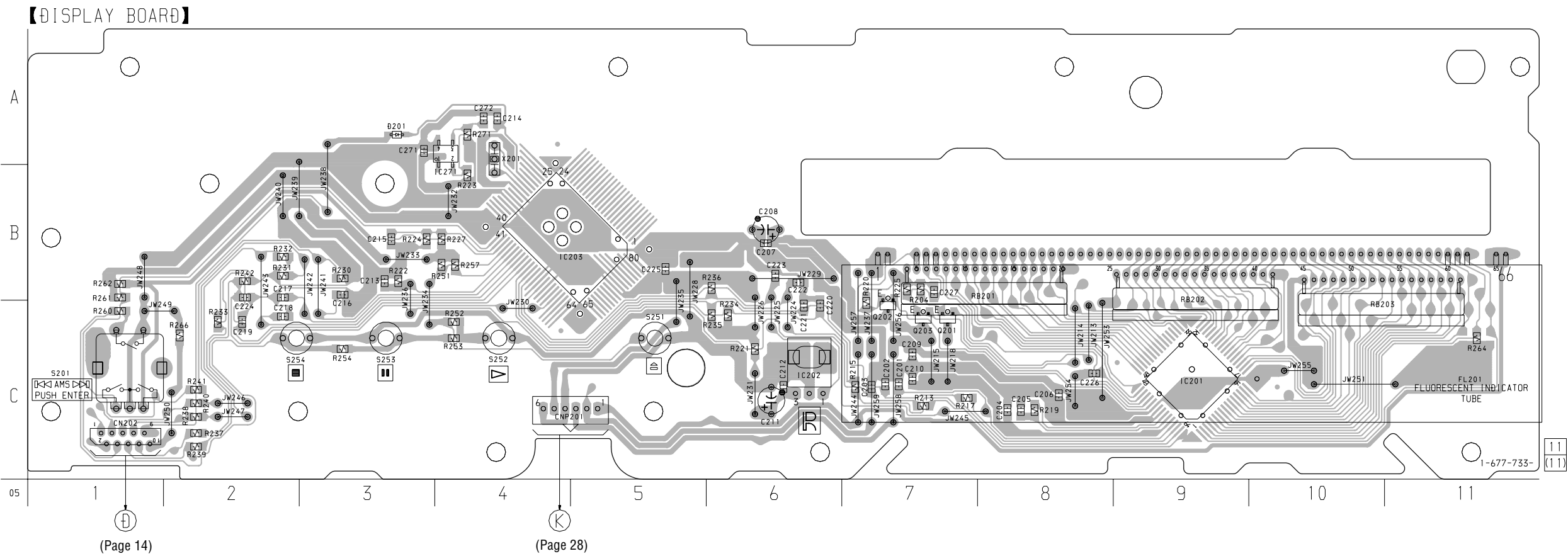
4-16. PRINTED WIRING BOARD – LOADING Board – • See page 11 for Circuit Boards Location.



4-17. SCHEMATIC DIAGRAM – LOADING Board –



4-18. PRINTED WIRING BOARD – DISPLAY Board – • See page 11 for Circuit Boards Location.

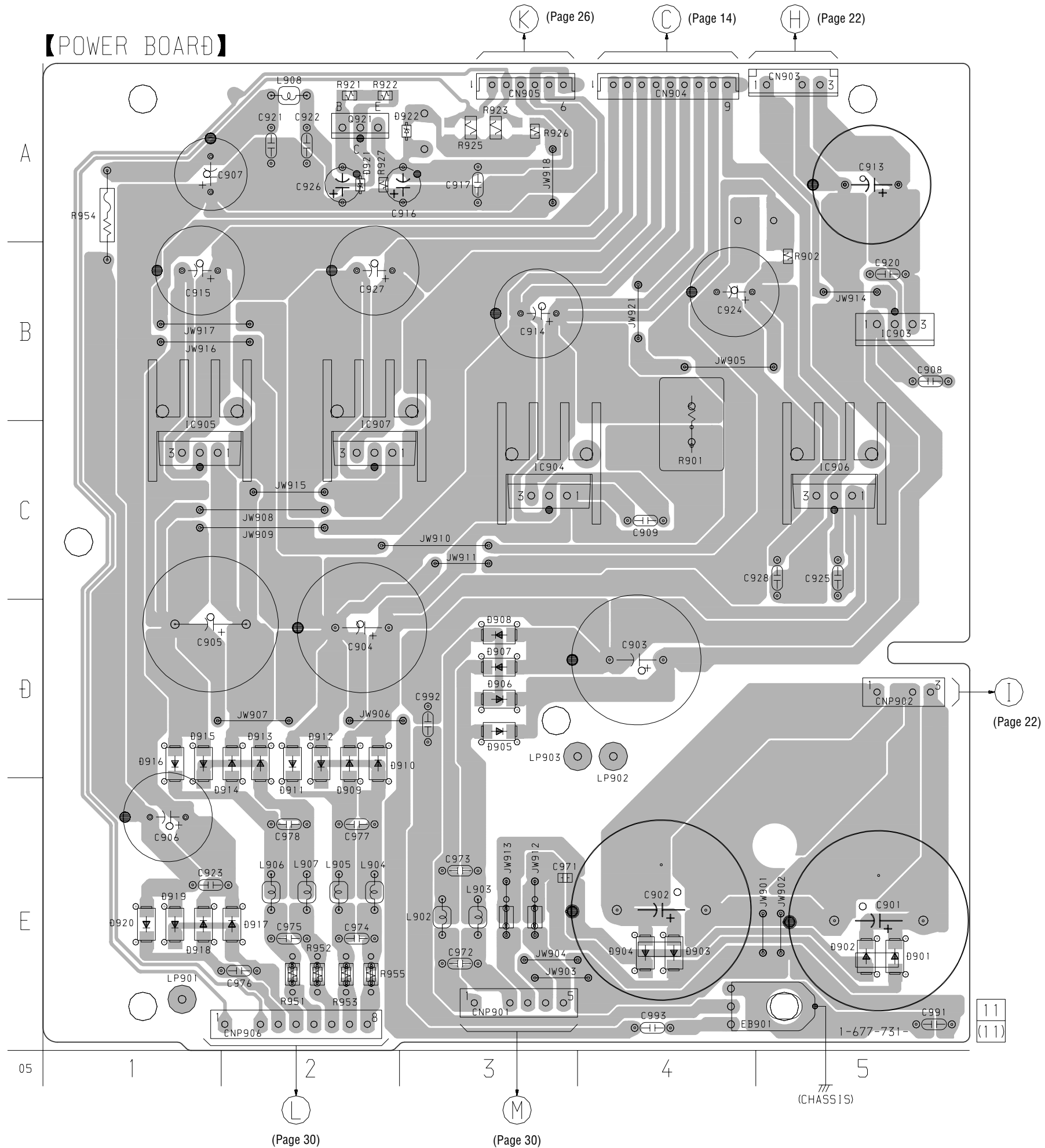
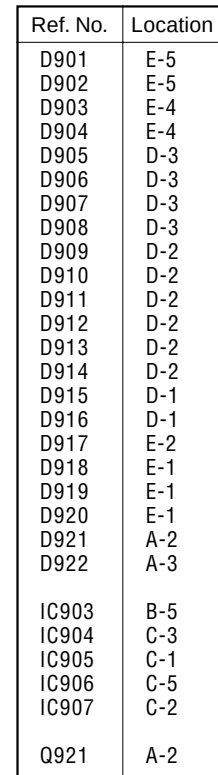


• Semiconductor Location

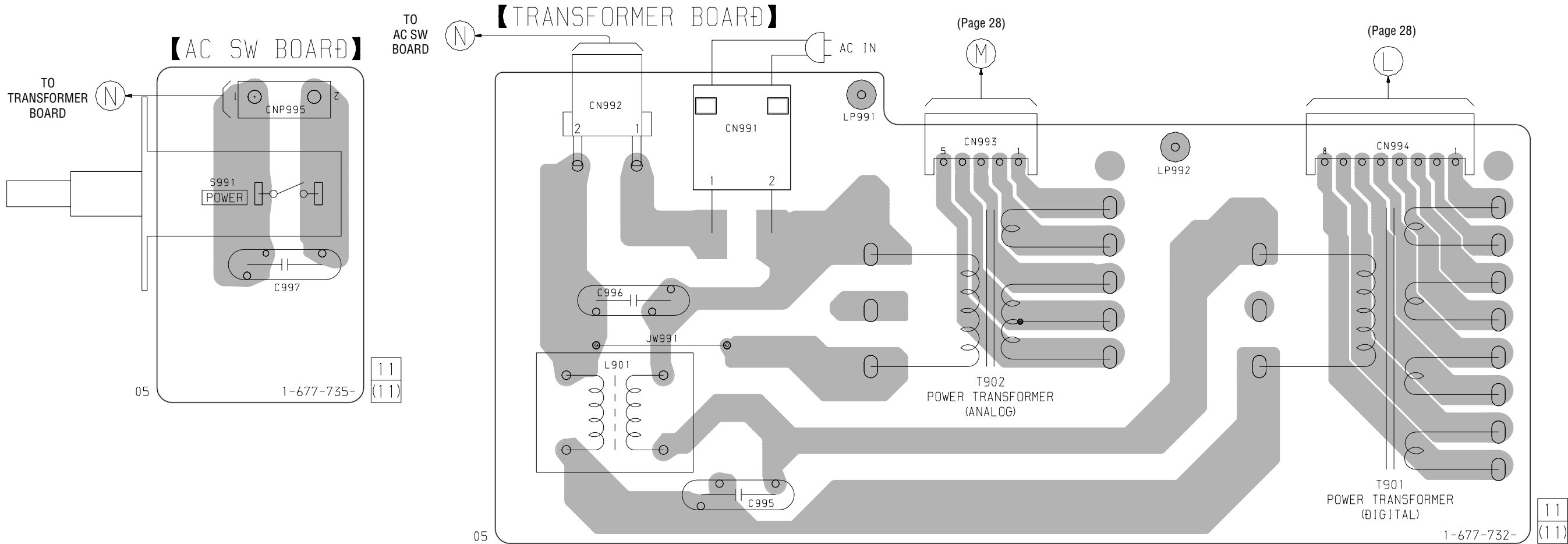
Ref. No.	Location
D201	A-3
IC201	C-9
IC202	C-6
IC203	B-4
IC271	A-4
Q201	C-7
Q202	C-7
Q203	C-7



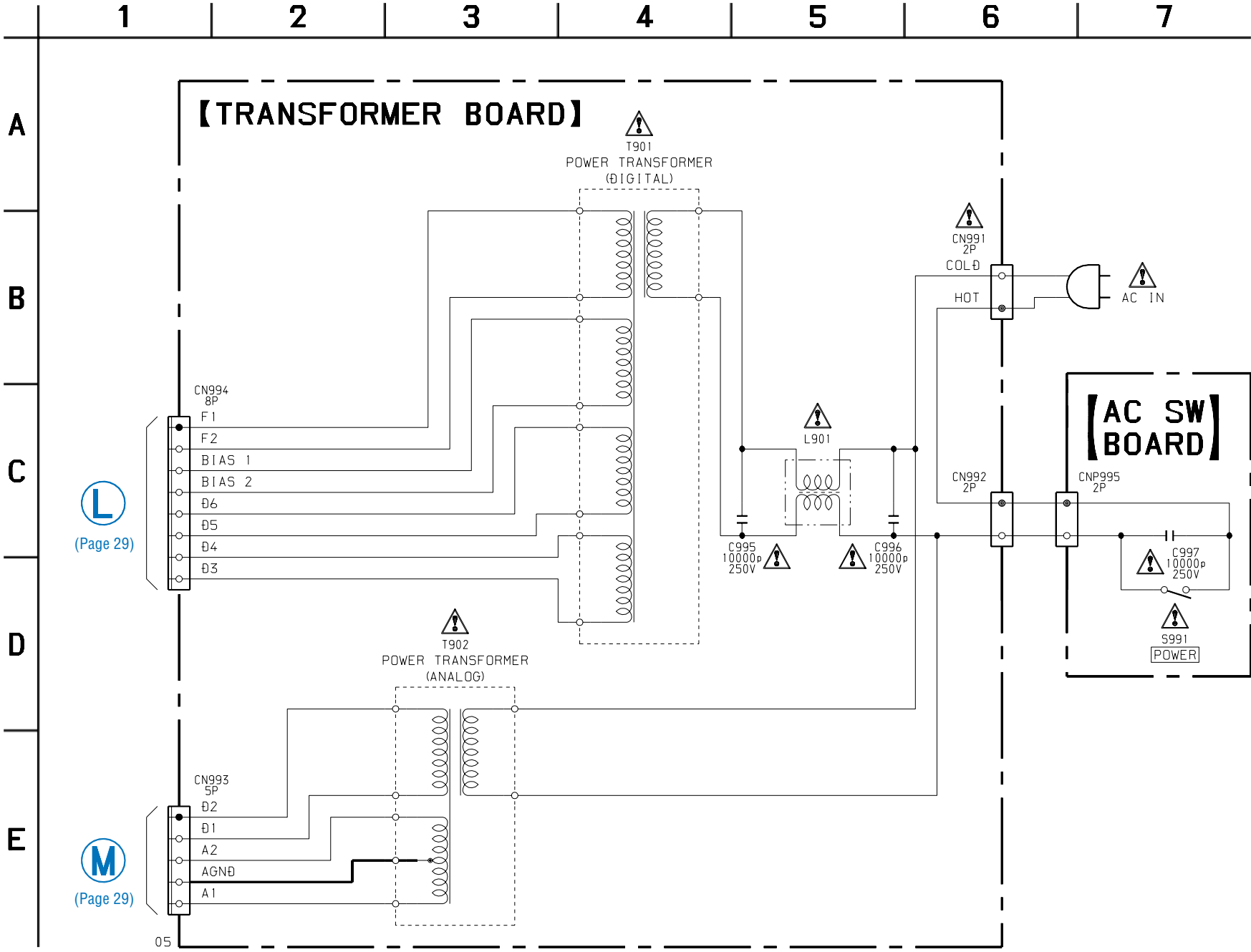
4-20. PRINTED WIRING BOARD – POWER Board – • See page 11 for Circuit Boards Location.



4-22. PRINTED WIRING BOARDS – AC SW/TRANSFORMER Boards – • See page 11 for Circuit Boards Location.

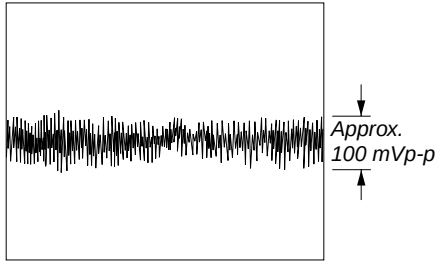


4-23. SCHEMATIC DIAGRAM – AC SW/TRANSFORMER Boards –

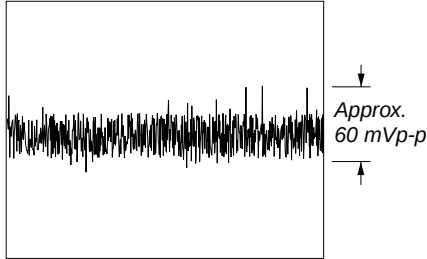


• Waveforms
– TK Board –

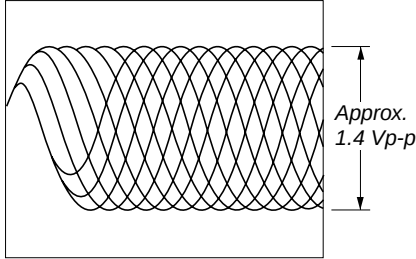
1 IC001 39 (TE) (CD PLAY)



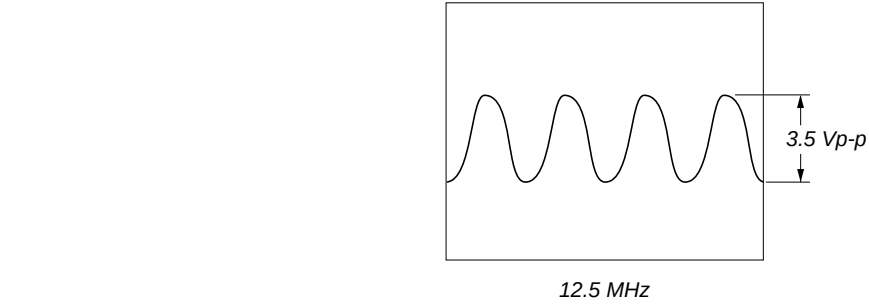
2 IC001 40 (FE) (CD PLAY)



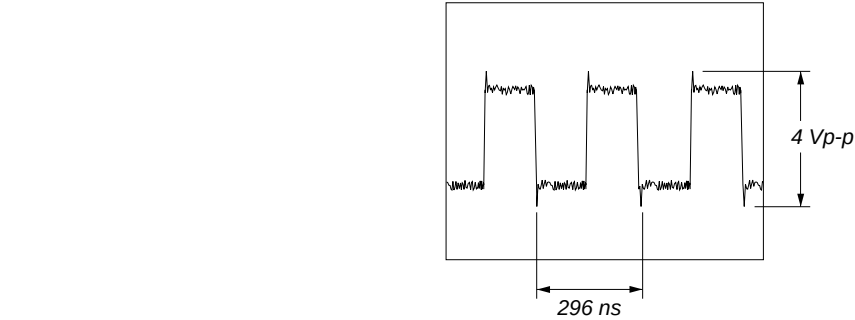
3 IC001 54 (SIGO) (CD PLAY)



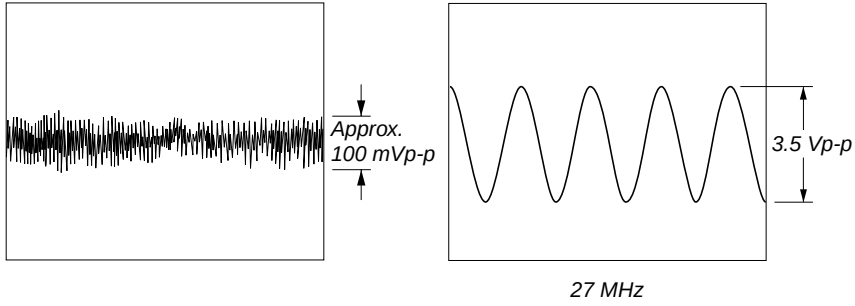
4 IC605 54 (X0)



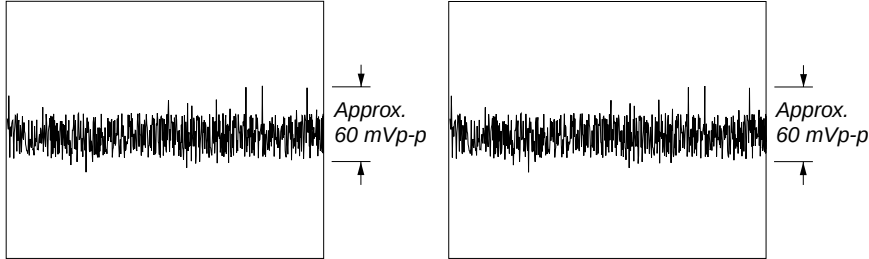
5 IC617 5 (SDCK)



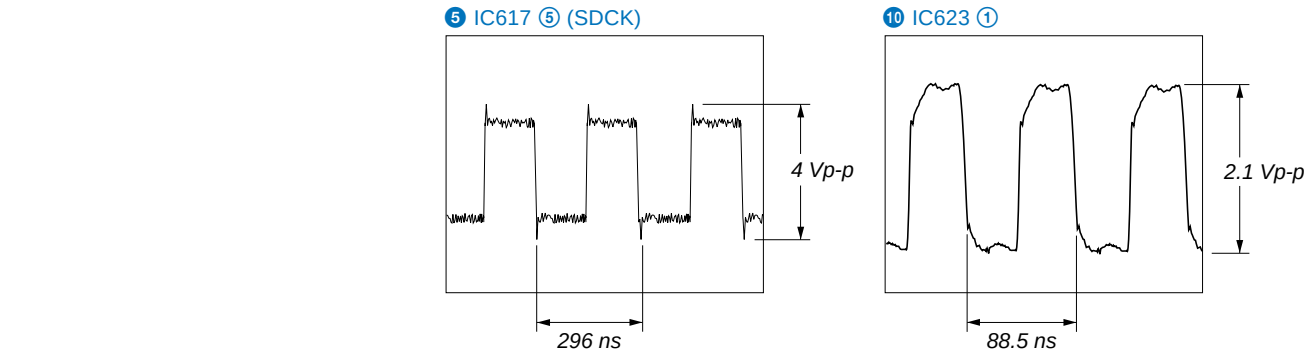
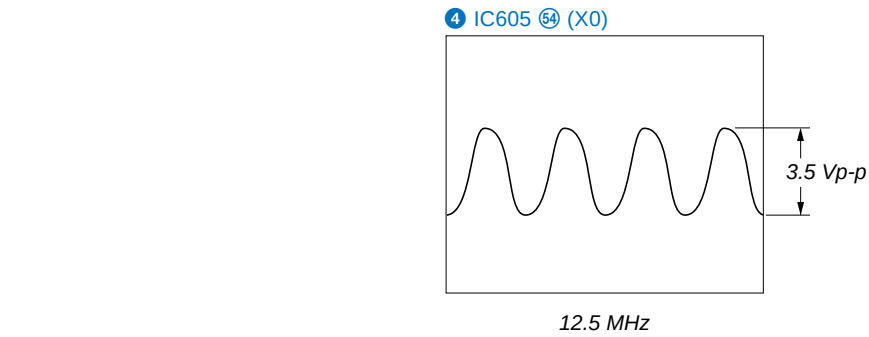
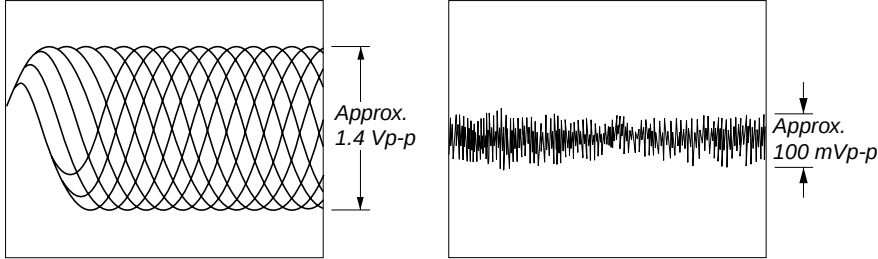
1 IC607 10 (X2/CLKIN)



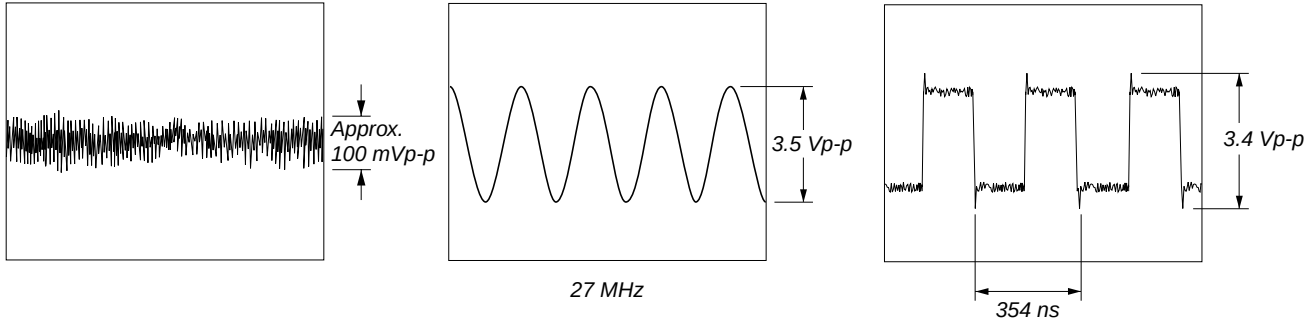
2 IC607 60 (ADC1) (CD PLAY)



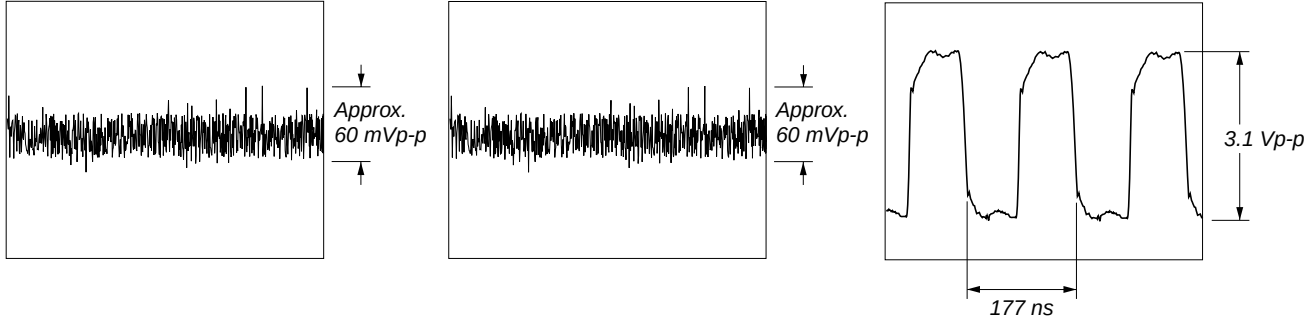
3 IC607 60 (ADC0) (CD PLAY)



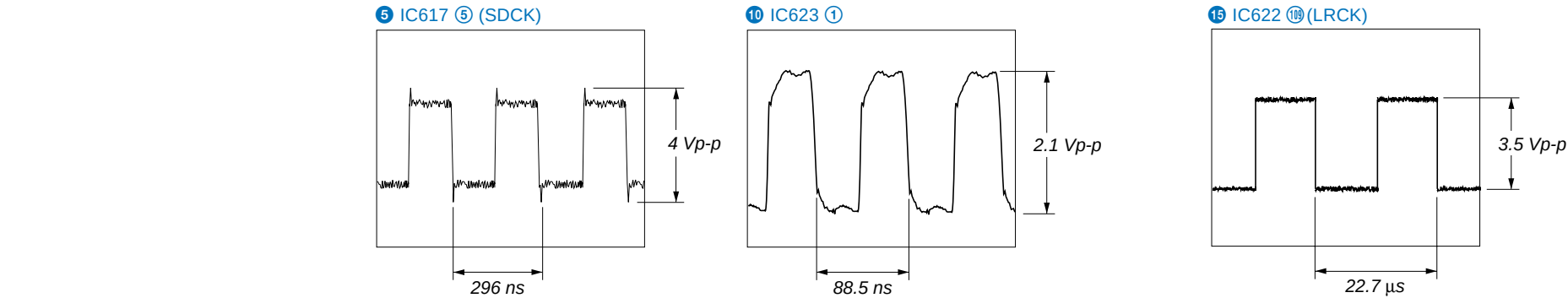
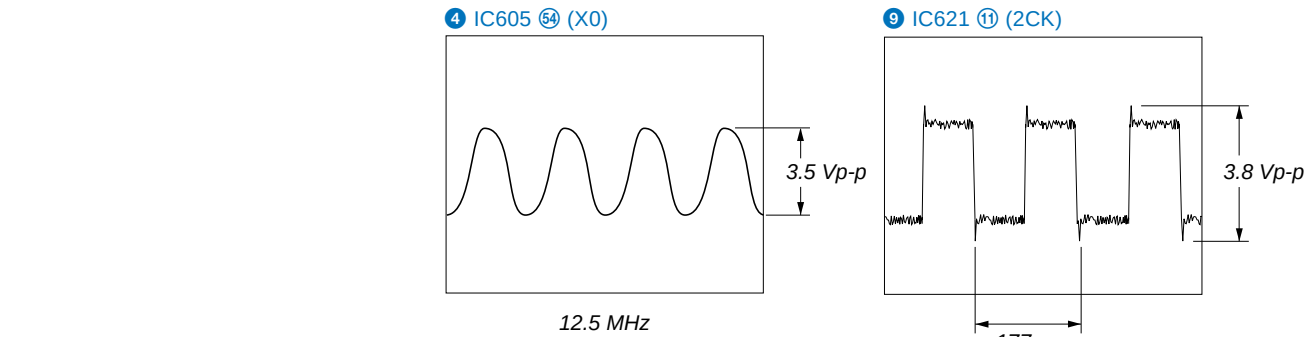
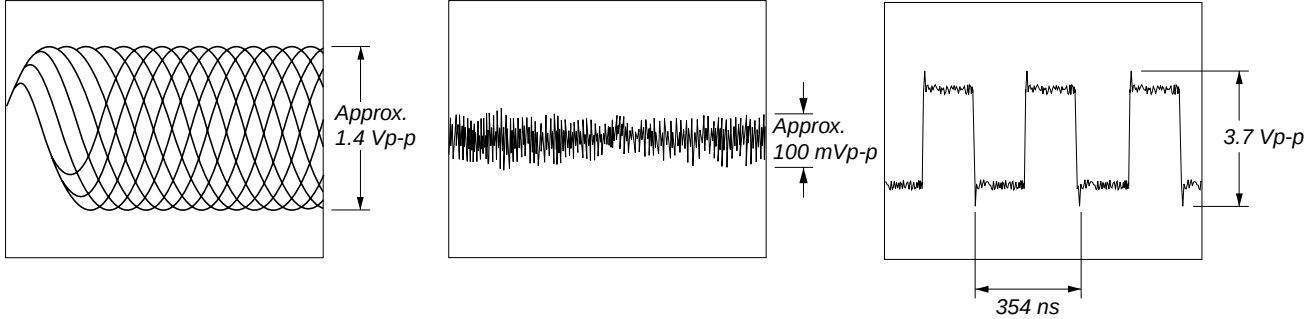
6 IC617 42 (BCKD)



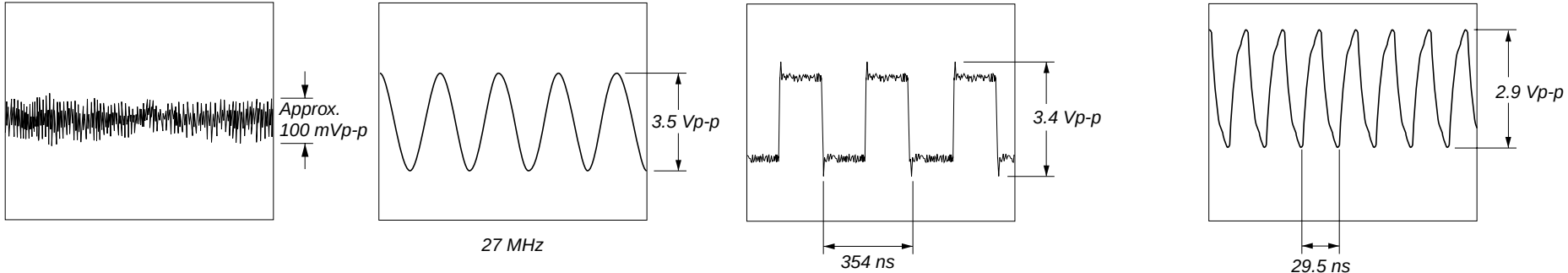
7 IC617 46 (BCKA)



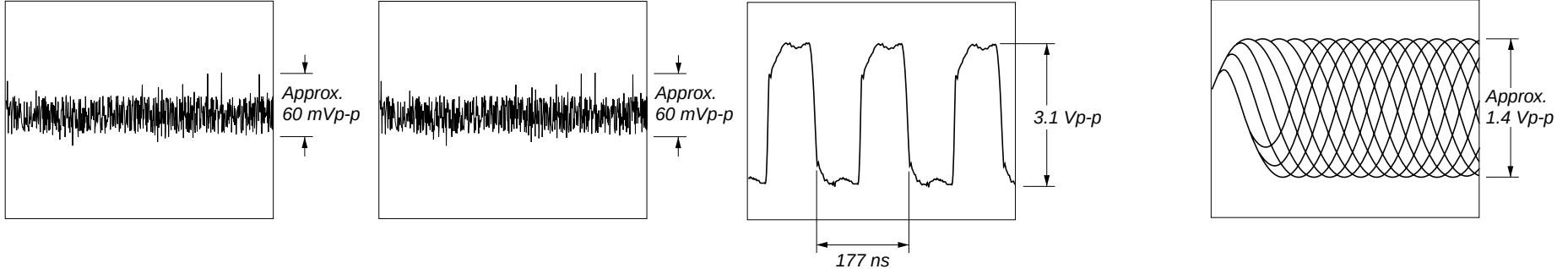
8 IC621 8 (X2Q)



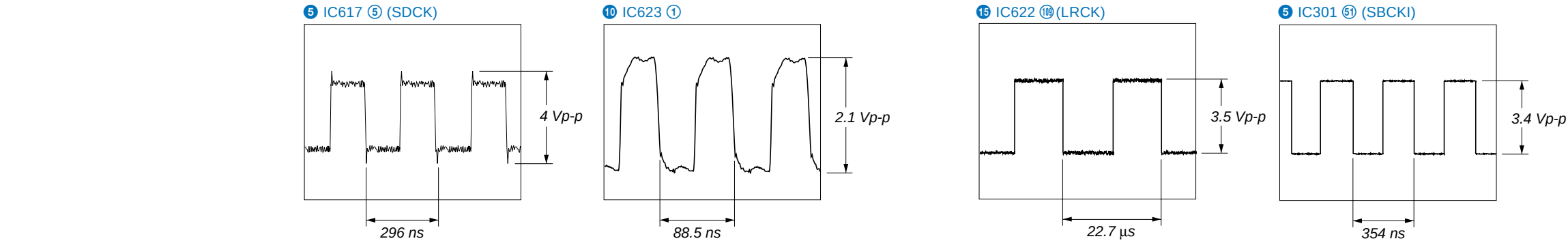
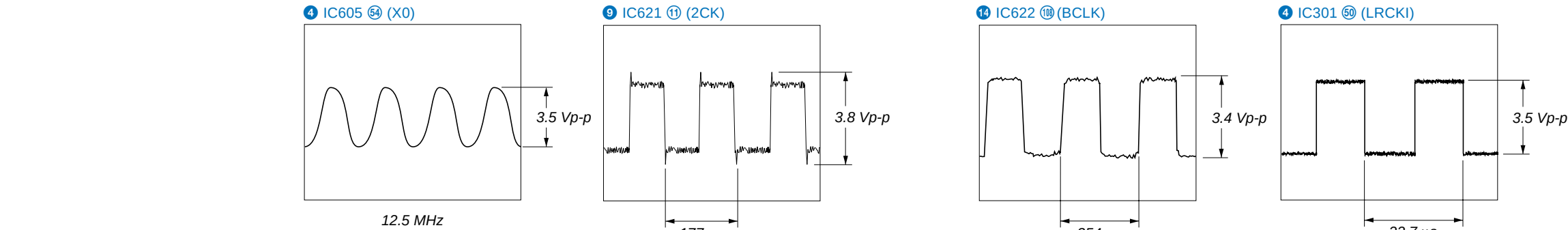
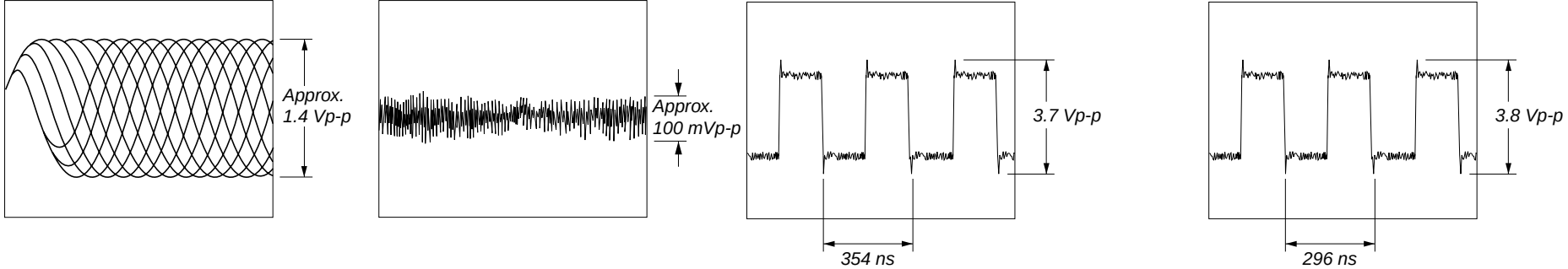
11 IC617 14 (MCKI)
IC622 23 (SCKI), IC623 8



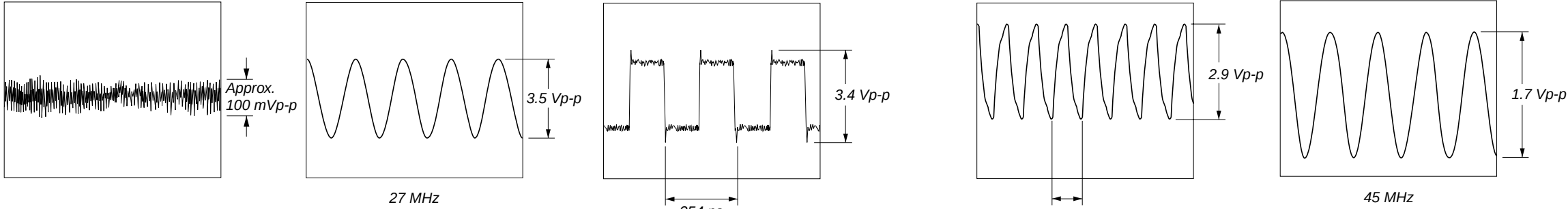
12 IC622 19 (RFIN2) (CD PLAY)



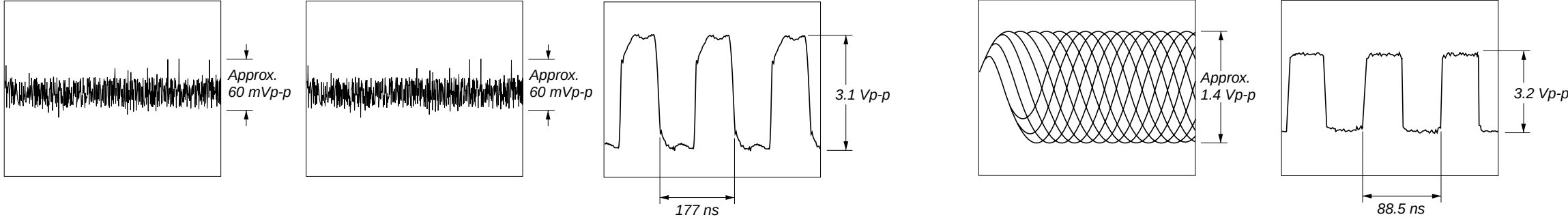
13 IC622 31 (SDCK)



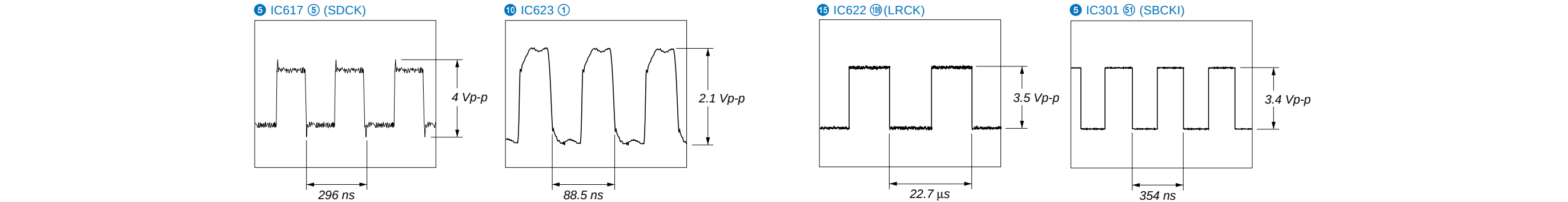
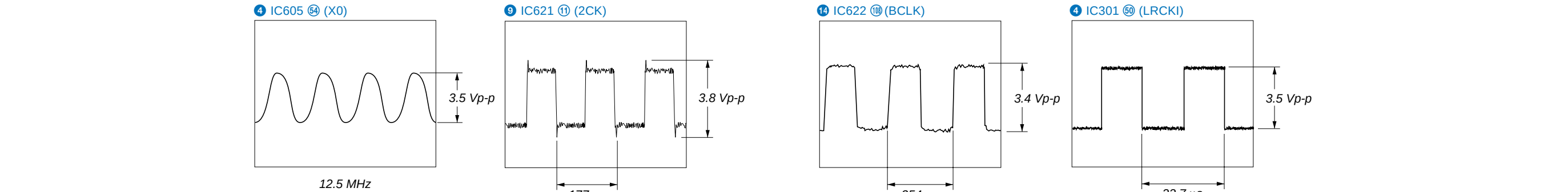
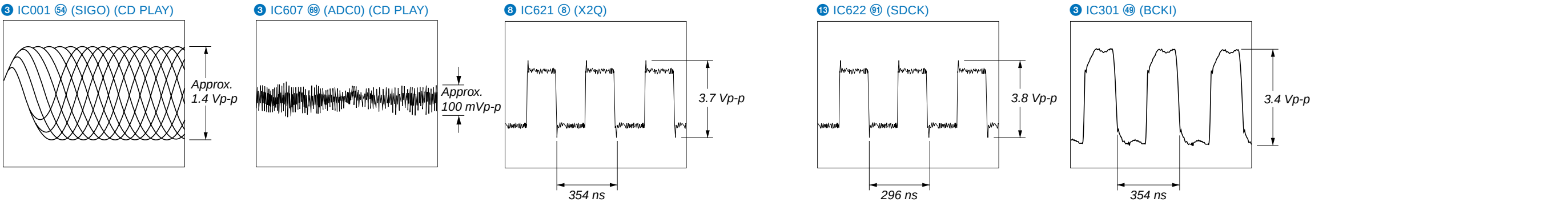
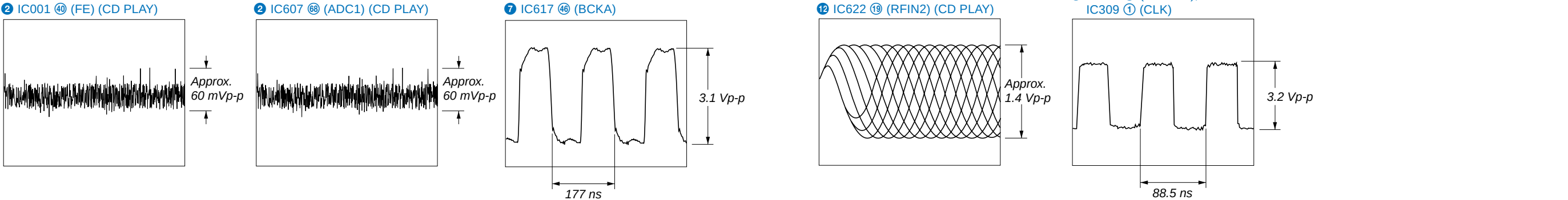
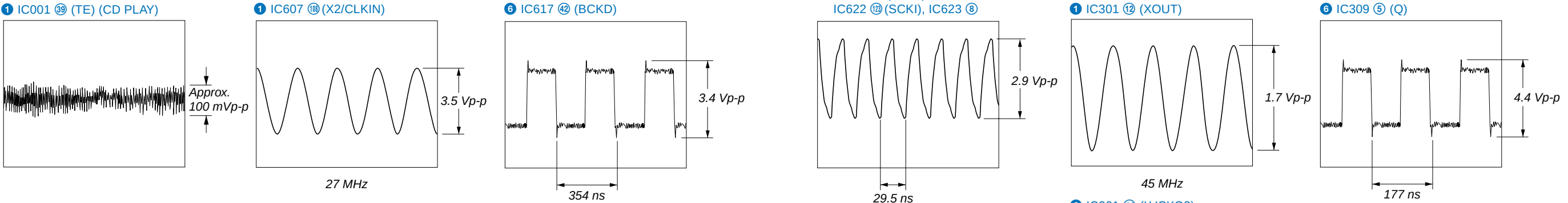
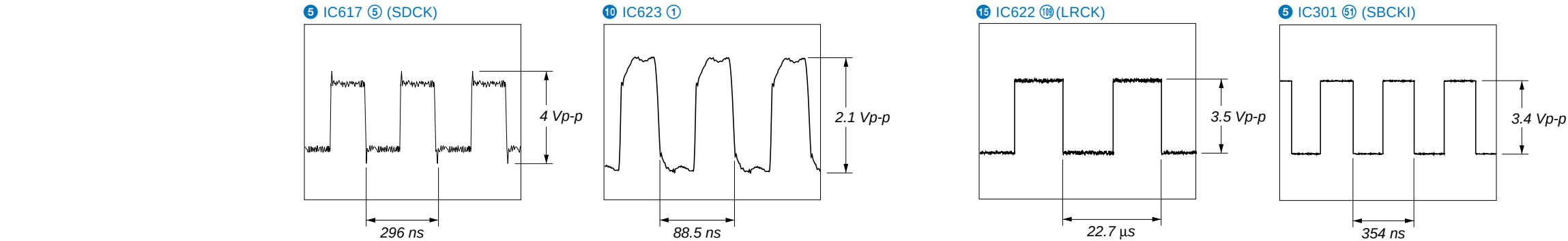
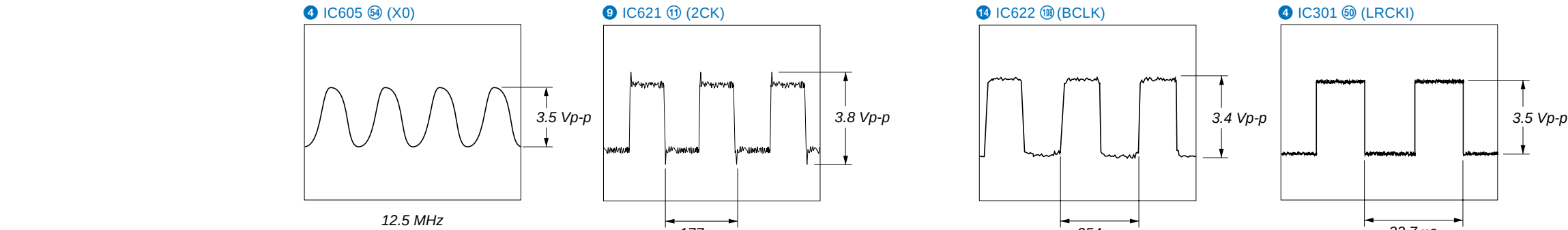
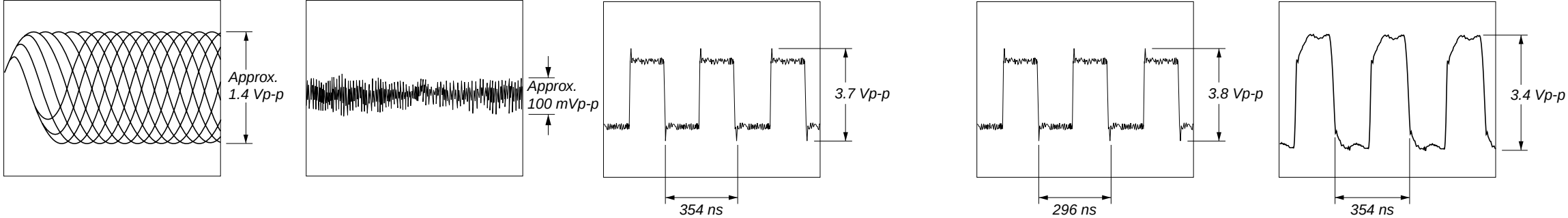
1 IC301 12 (XOUT)



2 IC301 44 (LVCKO2),
IC309 1 (CLK)

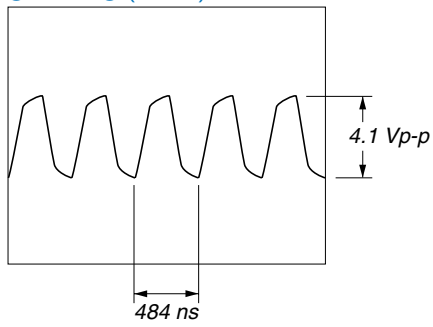


3 IC301 49 (BCKI)

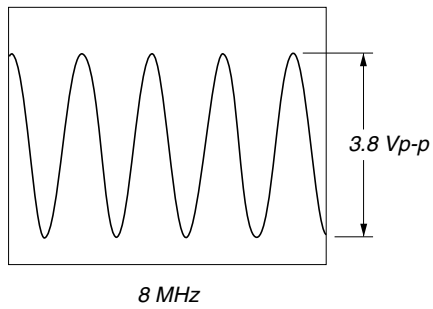


– DISPLAY Board –

① IC201 ⑤⑧ (OSCO)

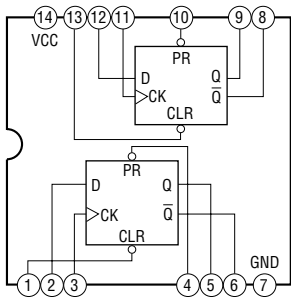


② IC203 ③① (EXTAL)

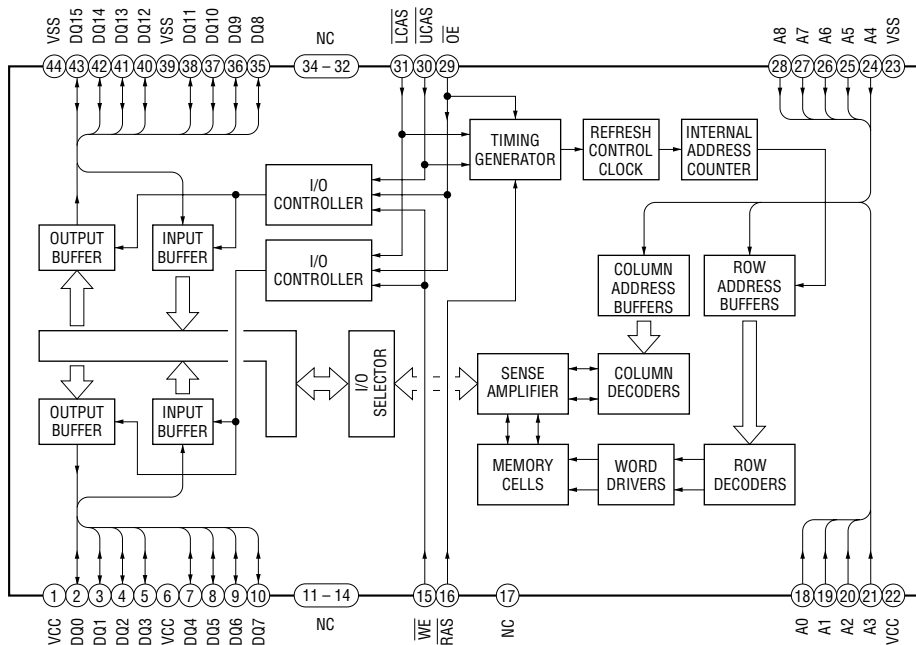


- IC Block Diagrams
- MAIN Board –

IC621 SN74LV74APWR

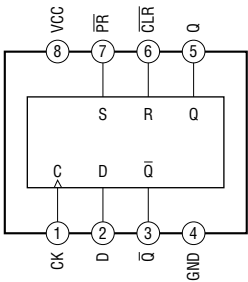


IC628 MSM54V16258BSL-40TS-K

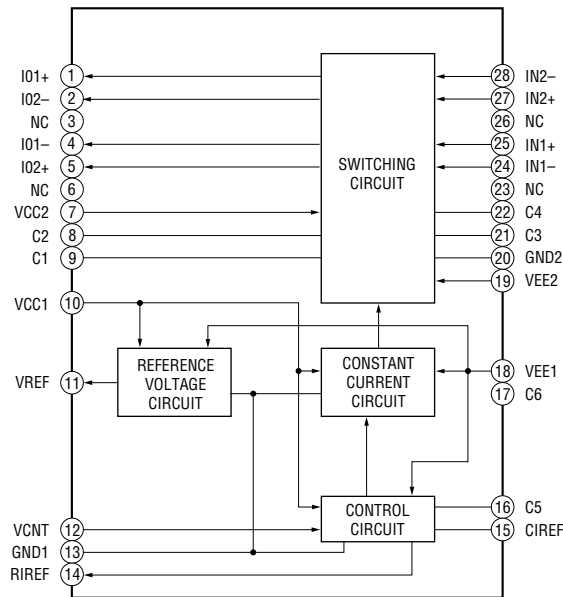


- AUDIO Board -

IC309 TC7W74F



IC401, 501 CXA8042AS



SECTION 5 EXPLODED VIEWS

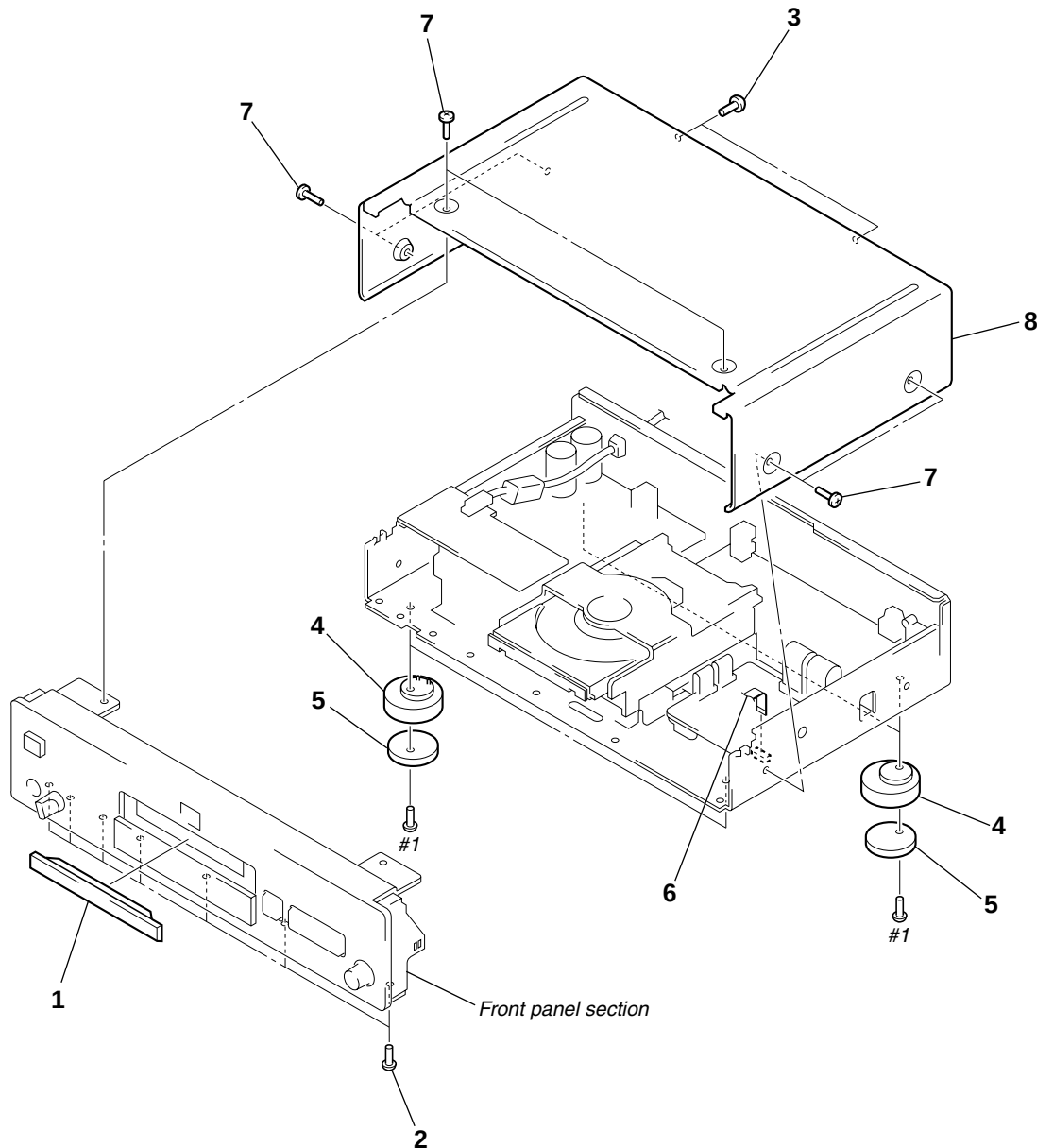
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)
 ↑ ↑
 Parts Color Cabinet's Color

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

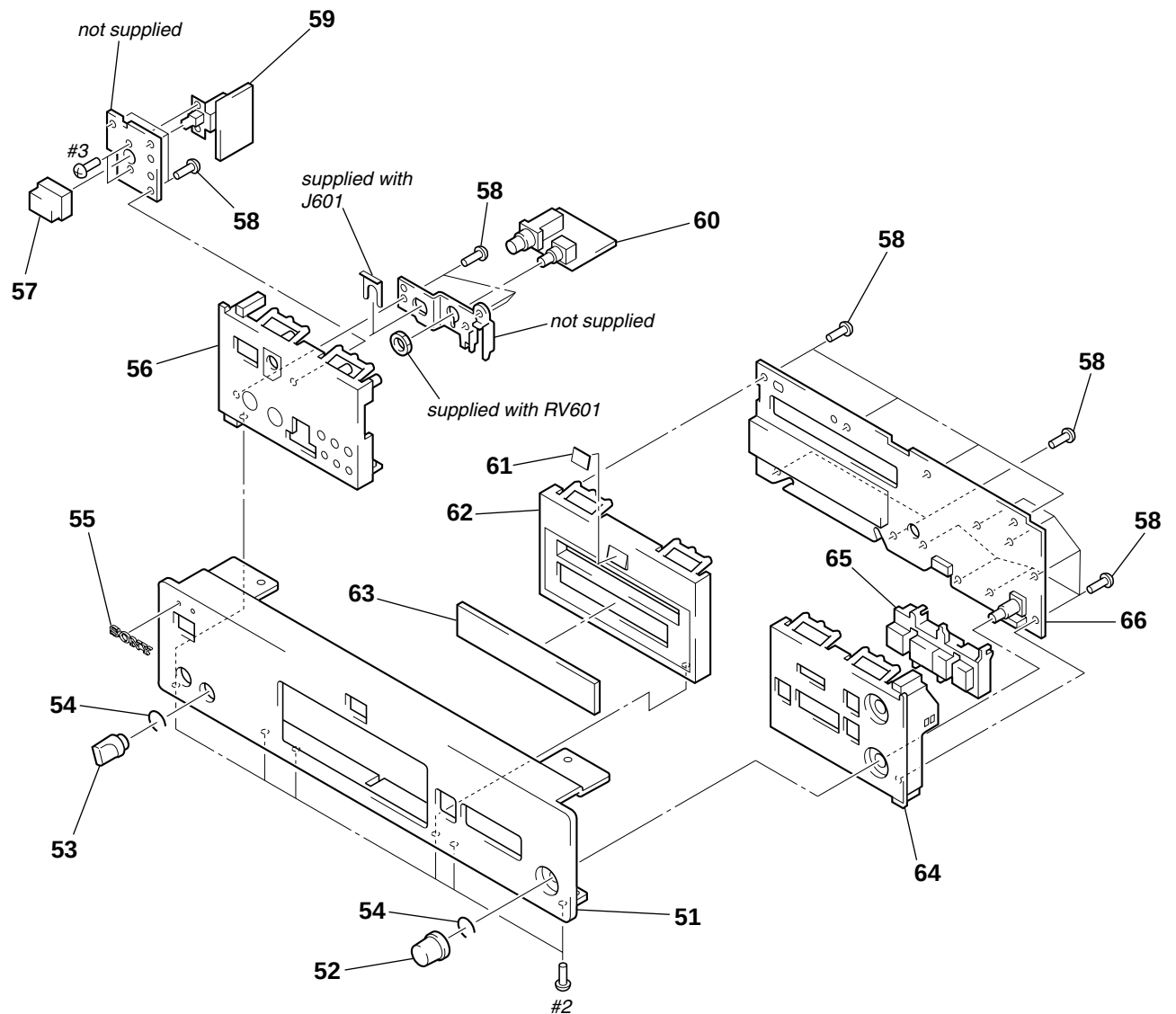
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

(1) COVER SECTION



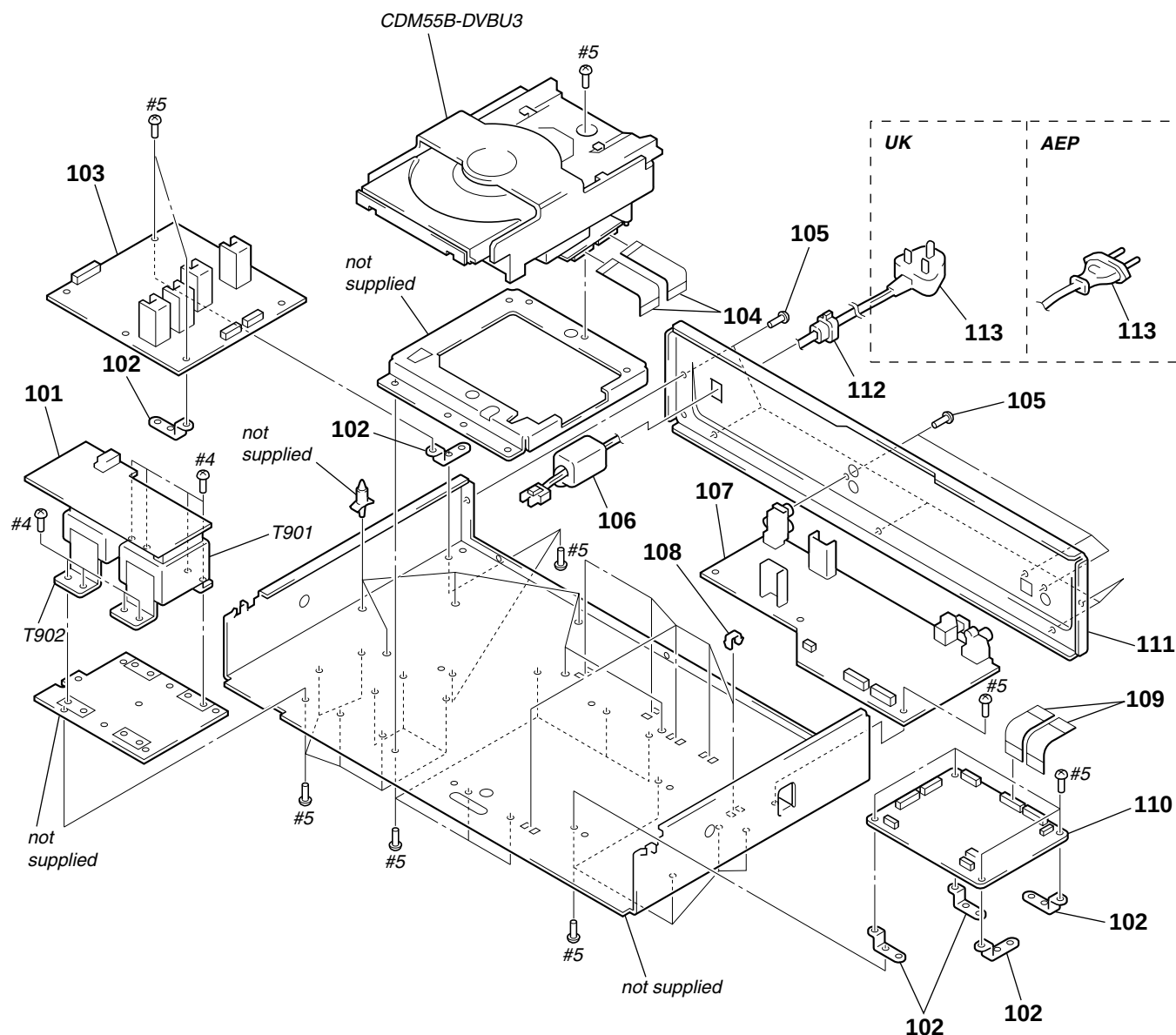
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4952-805-1	PANEL ASSY, LOADING (BLACK)		5	4-972-889-01	CUSHION	
1	X-4952-806-1	PANEL ASSY, LOADING (SILVER)		6	1-792-598-11	WIRE (FLAT TYPE) (10 CORE)	
2	3-704-515-31	SCREW (BV/RING)		7	4-227-843-01	SCREW (TP), FLAT HEAD (AEP: BLACK)	
3	4-210-291-01	SCREW (CASE3 TP2) (AEP: BLACK)		7	4-227-843-11	SCREW (TP), FLAT HEAD (AEP: SILVER)	
3	4-210-291-11	SCREW (CASE3 TP2) (AEP: SILVER)		7	4-210-082-01	SCREW (CASE) (UK)	
3	4-210-082-01	SCREW (CASE) (UK)		* 8	4-997-138-02	COVER (4095269) (BLACK)	
4	4-970-123-11	FOOT (F50180S) (BLACK)		* 8	4-997-138-42	COVER (4095269) (SILVER)	
4	4-970-123-31	FOOT (F50180S) (SILVER)					

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-227-839-01	PANEL, FRONT (BLACK)		58	4-951-620-01	SCREW (2.6X8), +BVTP	
51	4-227-839-11	PANEL, FRONT (SILVER)		59	1-677-735-11	AC SW BOARD	
52	4-227-834-01	KNOB (AMS) (BLACK)		60	1-677-734-11	HP BOARD	
52	4-227-834-11	KNOB (AMS) (SILVER)		61	4-227-841-01	EMBLEM (SACD) (for BLACK)	
53	3-354-931-01	KNOB (DIA. 10) (BLACK)		61	4-227-841-11	EMBLEM (SACD) (for SILVER)	
53	3-354-931-41	KNOB (DIA. 10) (SILVER)		62	4-227-184-01	BASE (M), PANEL (BLACK)	
54	3-354-981-01	SPRING (SUS), RING		62	4-227-184-11	BASE (M), PANEL (SILVER)	
55	4-942-568-41	EMBLEM (NO. 5), SONY (for BLACK)		63	4-227-835-01	PLATE, INDICATION	
55	4-942-568-61	EMBLEM (NO. 5), SONY (for SILVER)		64	4-227-183-01	BASE (R), PANEL (BLACK)	
56	4-227-832-01	BASE (L), PANEL (BLACK)		64	4-227-183-11	BASE (R), PANEL (SILVER)	
56	4-227-832-11	BASE (L), PANEL (SILVER)		65	4-227-833-01	BUTTON (PLAY) (⏮. ▷. ■) (BLACK)	
57	4-998-790-31	KNOB, POWER (BLACK)		65	4-227-833-11	BUTTON (PLAY) (⏮. ▷. ■) (SILVER)	
57	4-998-790-41	KNOB, POWER (SILVER)		66	A-4725-091-A	DISPLAY BOARD, COMPLETE	

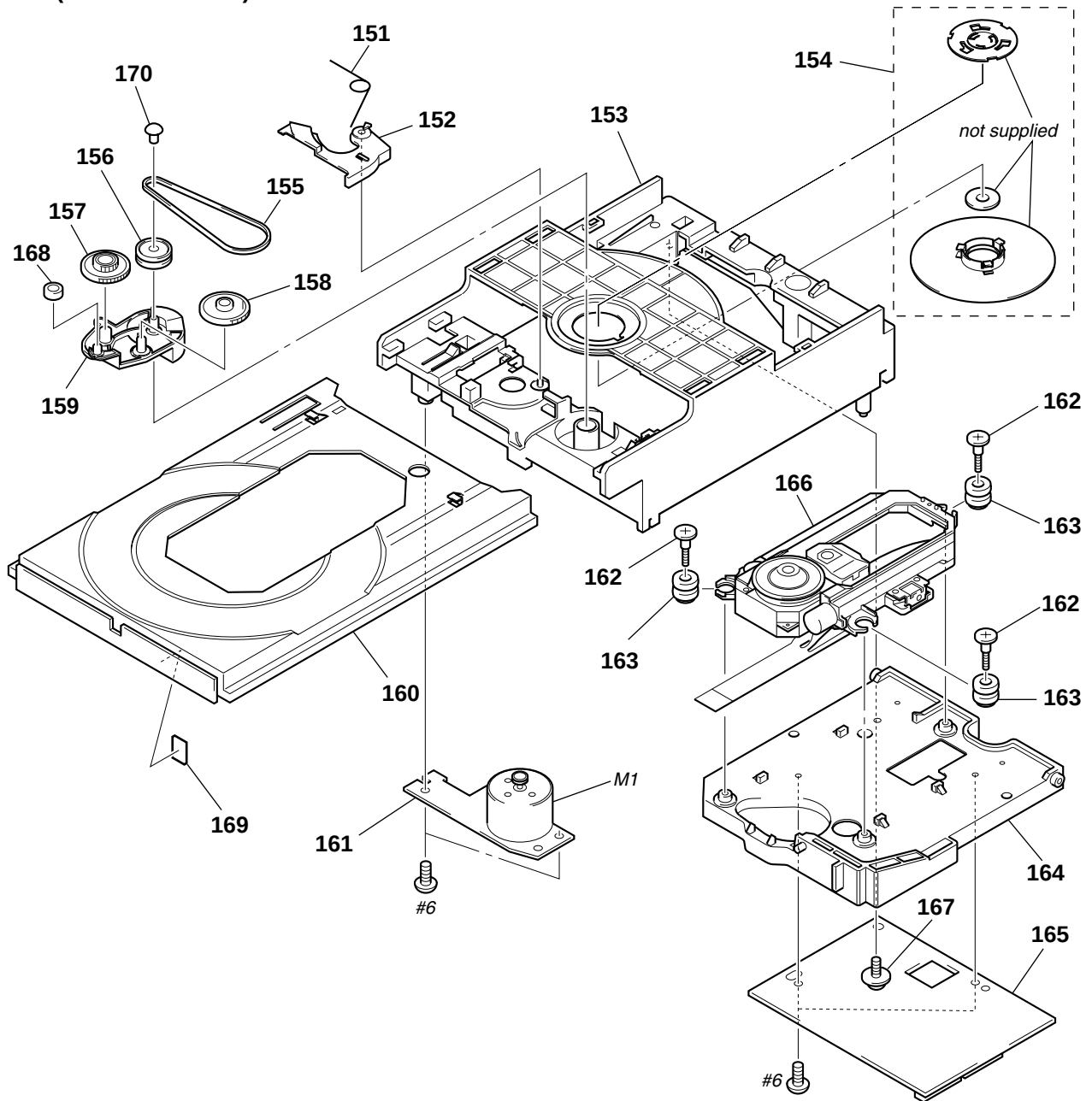
(3) CHASSIS SECTION



The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	1-677-732-11	TRANSFORMER BOARD		109	1-792-599-11	WIRE (FLAT TYPE) (16 CORE)	
* 102	3-332-563-01	BRACKET (P)		110	A-4725-086-A	MAIN BOARD, COMPLETE	
103	A-4725-090-A	POWER BOARD, COMPLETE (AEP)		111	4-227-711-01	PANEL, BACK (AEP)	
103	A-4725-212-A	POWER BOARD, COMPLETE (UK)		111	4-227-711-11	PANEL, BACK (UK)	
104	1-792-600-11	WIRE (FLAT TYPE) (18 CORE)		112	4-966-267-11	BUSHING (FBS001), CORD	
105	3-704-515-21	SCREW (BV/RING)		Δ 113	1-558-568-21	CORD, POWER (AEP)	
106	1-543-653-11	CORE ASSY, BEAD (DIVISION TYPE)		Δ 113	1-696-586-11	CORD, POWER (UK)	
107	A-4725-088-A	AUDIO BOARD, COMPLETE (AEP)		Δ T901	1-435-459-11	TRANSFORMER, POWER (DIGITAL)	
107	A-4725-094-A	AUDIO BOARD, COMPLETE (UK)		Δ T902	1-435-460-11	TRANSFORMER, POWER (ANALOG)	
* 108	3-677-153-00	HOLDER					

(4) MECHANISM DECK SECTION
(CDM55B-DVBU3)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	4-220-239-01	SPRING, TORSION		162	4-981-923-01	SCREW (M), STEP	
152	4-220-229-01	LEVER (SW)		163	3-053-847-01	INSULATOR	
153	4-224-895-01	HOLDER (KHM-220)		164	4-220-230-01	CHASSIS	
154	A-4672-876-A	PULLEY (AT) ASSY		165	A-4725-072-A	TK BOARD, COMPLETE	
155	4-221-816-01	BELT (CDM55)		△ 166	A-6062-397-A	OPTICAL PICK-UP KHM-220AAA	
156	4-220-234-01	PULLEY (LDG)		167	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
157	4-220-237-01	GEAR (A)		168	4-221-815-01	ROLLER	
158	4-220-238-01	GEAR (B)		169	4-925-315-31	DAMPER	
159	4-220-233-01	CAM (CDM55)		170	4-227-598-01	SPACER (55)	
160	4-226-180-11	TRAY (55-L)		M1	A-4672-771-A	MOTOR (LD) ASSY (LOADING)	
161	1-674-336-11	LOADING BOARD					

SECTION 6 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA. . : μ A. . uPA. . : μ PA. .
uPB. . : μ PB. . uPC. . : μ PC. .
uPD. . : μ PD. .
- CAPACITORS
uF: μ F
- COILS
uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
	1-677-735-11	AC SW BOARD *****					C324	1-102-944-00	CERAMIC	7PF	0.5PF	50V	
		< CAPACITOR >					C325	1-102-944-00	CERAMIC	7PF	0.5PF	50V	
Δ C997	1-113-927-11	CERAMIC	10000PF	20%	250V		C326	1-115-197-11	ELECT	100uF	20%	25V	
		< CONNECTOR >					C327	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
							C328	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
							C329	1-136-850-11	MYLAR	0.1uF	5%	63V	
							C330	1-136-850-11	MYLAR	0.1uF	5%	63V	
							C331	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
CNP995	1-690-122-31	REED (WITH CONNECTOR) (2 CORE)					C332	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
		< SWITCH >					C333	1-128-091-11	ELECT	1000uF	20%	50V	
Δ S991	1-572-267-21	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)					C334	1-128-091-11	ELECT	1000uF	20%	50V	

	A-4725-088-A	AUDIO BOARD, COMPLETE (AEP)					C335	1-126-024-11	ELECT	220uF	20%	25V	
	A-4725-094-A	AUDIO BOARD, COMPLETE (UK)					C336	1-126-024-11	ELECT	220uF	20%	25V	

*	3-309-144-21	HEAT SINK					C337	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
	7-685-871-01	SCREW +BVTT 3X6 (S)					C338	1-126-013-11	ELECT	1000uF	20%	16V	
		< CAPACITOR >					C339	1-107-682-11	CERAMIC CHIP	1uF	10%	16V	
C300	1-126-927-11	ELECT	2200uF	20%	10V		C340	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C301	1-126-927-11	ELECT	2200uF	20%	10V		C341	1-115-197-11	ELECT	100uF	20%	25V	
C302	1-124-700-11	ELECT	330uF	20%	25V		C342	1-115-197-11	ELECT	100uF	20%	25V	
C303	1-124-700-11	ELECT	330uF	20%	25V		C343	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C304	1-126-929-11	ELECT	4700uF	20%	10V		C344	1-164-346-11	CERAMIC CHIP	1uF		16V	
							C345	1-164-346-11	CERAMIC CHIP	1uF		16V	
C305	1-109-982-11	CERAMIC CHIP	1uF	10%	10V		C346	1-164-346-11	CERAMIC CHIP	1uF		16V	
C306	1-109-982-11	CERAMIC CHIP	1uF	10%	10V		C347	1-164-346-11	CERAMIC CHIP	1uF		16V	
C307	1-109-982-11	CERAMIC CHIP	1uF	10%	10V		C348	1-164-346-11	CERAMIC CHIP	1uF		16V	
C308	1-109-982-11	CERAMIC CHIP	1uF	10%	10V		C351	1-126-059-11	ELECT	10uF	20%	50V	
C309	1-109-982-11	CERAMIC CHIP	1uF	10%	10V		C352	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
							C353	1-126-009-81	ELECT	100uF	20%	16V	
C310	1-109-982-11	CERAMIC CHIP	1uF	10%	10V		C357	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	
C311	1-136-850-11	MYLAR	0.1uF	5%	63V		C358	1-126-960-11	ELECT	1uF	20%	50V	
C312	1-136-850-11	MYLAR	0.1uF	5%	63V		C363	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C313	1-136-850-11	MYLAR	0.1uF	5%	63V		C364	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C314	1-136-850-11	MYLAR	0.1uF	5%	63V		C392	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C315	1-136-850-11	MYLAR	0.1uF	5%	63V		C393	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C316	1-136-850-11	MYLAR	0.1uF	5%	63V		C401	1-137-420-11	FILM	0.047uF	5%	100V	
C317	1-136-850-11	MYLAR	0.1uF	5%	63V		C402	1-128-200-11	ELECT	47uF	20%	63V	
C318	1-136-850-11	MYLAR	0.1uF	5%	63V		C403	1-128-200-11	ELECT	47uF	20%	63V	
C321	1-128-202-11	ELECT	220uF	20%	63V		C404	1-125-822-11	TANTALUM	10uF	20%	10V	
							C405	1-128-200-11	ELECT	47uF	20%	63V	
C322	1-125-781-21	ELECT	220uF	20%	35V		C406	1-136-802-11	MYLAR	0.015uF	5%	100V	
C323	1-117-775-31	ELECT	0.1uF	10%	250V		C407	1-130-892-00	FILM	0.015uF	5%	63V	
							C408	1-136-850-11	MYLAR	0.1uF	5%	63V	
							C409	1-136-850-11	MYLAR	0.1uF	5%	63V	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C410	1-130-892-00	FILM	0.015uF 3% 100V	IC303	8-759-231-53	IC M5F7805L	
C412	1-130-339-11	FILM	0.0056uF 3% 100V	IC304	8-759-604-86	IC M5F7807L	
C413	1-130-339-11	FILM	0.0056uF 3% 100V	IC305	8-759-604-90	IC M5F7907L	
C414	1-136-252-00	FILM	0.0015uF 3% 100V				
C415	1-136-252-00	FILM	0.0015uF 3% 100V	IC306	8-759-445-59	IC BA033T	
				IC307	8-759-231-58	IC M5F7812L	
C416	1-136-816-11	FILM	0.0022uF 5% 100V	IC308	8-759-245-86	IC M5F7912L	
C417	1-136-257-00	FILM	0.0039uF 3% 100V	IC309	8-759-180-84	IC TC7W74F (TE12R)	
C420	1-128-201-11	ELECT	100uF 20% 63V	IC331	8-759-711-85	IC NJM4580E-D-TE2	
C421	1-128-201-11	ELECT	100uF 20% 63V				
C422	1-137-506-11	ELECT	0.47uF 10% 63V	IC352	8-749-921-12	IC GP1F32T (DIGITAL OUT CD OPTICAL)	
				IC401	8-759-371-51	IC CXA8042AS	
C423	1-136-808-11	FILM	100PF 5% 100V	IC402	8-759-443-33	IC OPA2132PA	
C424	1-163-021-11	CERAMIC CHIP	0.01uF 10% 50V	IC403	8-759-686-08	IC OPA2604AU/2K5	
C451	1-163-239-11	CERAMIC CHIP	33PF 5% 50V	IC501	8-759-371-51	IC CXA8042AS	
C452	1-164-505-11	CERAMIC CHIP	2.2 uF 16V				
C453	1-125-859-21	FILM	0.001uF 5% 50V	IC502	8-759-443-33	IC OPA2132PA	
				IC503	8-759-686-08	IC OPA2604AU/2K5	
C501	1-137-420-11	FILM	0.047uF 5% 100V			< JACK >	
C502	1-128-200-11	ELECT	47uF 20% 63V	J301	1-774-727-11	JACK, PIN 2P (ANALOG OUT)	
C503	1-128-200-11	ELECT	47uF 20% 63V	J351	1-770-905-21	JACK, PIN 1P (DIGITAL OUT CD COAXIAL)	
C504	1-125-822-11	TANTALUM	10uF 20% 10V			< SHORT >	
C505	1-128-200-11	ELECT	47uF 20% 63V				
				JW304	1-216-295-00	SHORT	0
C506	1-136-802-11	MYLAR	0.015uF 5% 100V	JW305	1-216-295-00	SHORT	0
C507	1-130-892-00	FILM	0.015uF 5% 63V			< RESISTOR/NOISE FILTER/FERRITE BEAD >	
C508	1-136-850-11	MYLAR	0.1uF 5% 63V				
C509	1-136-850-11	MYLAR	0.1uF 5% 63V				
C510	1-130-892-00	FILM	0.015uF 3% 100V				
				L302	1-216-042-00	METAL CHIP	510 5% 1/10W
C512	1-130-339-11	FILM	0.0056uF 3% 100V	L303	1-216-295-00	SHORT	0
C513	1-130-339-11	FILM	0.0056uF 3% 100V	L304	1-216-042-00	METAL CHIP	510 5% 1/10W
C514	1-136-252-00	FILM	0.0015uF 3% 100V	L306	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
C515	1-136-252-00	FILM	0.0015uF 3% 100V	L307	1-216-049-11	METAL CHIP	1K 5% 1/10W
C516	1-136-816-11	FILM	0.0022uF 5% 100V				
				L308	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
C517	1-136-257-00	FILM	0.0039uF 3% 100V	L309	1-424-122-11	FILTER, NOISE	
C520	1-128-201-11	ELECT	100uF 20% 63V	L310	1-424-122-11	FILTER, NOISE	
C521	1-128-201-11	ELECT	100uF 20% 63V	L311	1-424-122-11	FILTER, NOISE	
C522	1-137-506-11	ELECT	0.47uF 10% 63V	L312	1-424-122-11	FILTER, NOISE	
C523	1-136-808-11	CERAMIC CHIP	100PF 5% 100V				
				L321	1-424-122-11	FILTER, NOISE	
C524	1-163-021-11	CERAMIC CHIP	0.01uF 10% 50V	L322	1-424-153-11	FILTER, NOISE	
C551	1-163-239-11	CERAMIC CHIP	33PF 5% 50V	L351	1-216-295-00	SHORT	0
C552	1-164-505-11	CERAMIC CHIP	2.2uF 16V	L352	1-414-234-22	FERRITE BEAD	
C553	1-125-859-21	FILM	0.001uF 5% 50V	L353	1-414-234-22	FERRITE BEAD	
		< CONNECTOR >					
* CN301	1-564-506-11	PLUG, CONNECTOR 3P		L354	1-414-234-22	FERRITE BEAD	
CN302	1-770-646-11	CONNECTOR, FFC/FPC 16P		L401	1-424-122-11	FILTER, NOISE	
CN303	1-770-646-11	CONNECTOR, FFC/FPC 16P		L402	1-424-122-11	FILTER, NOISE	
* CN304	1-564-506-11	PLUG, CONNECTOR 3P		L501	1-424-122-11	FILTER, NOISE	
CN351	1-506-468-11	PIN, CONNECTOR 3P		L502	1-424-122-11	FILTER, NOISE	
		< DIODE >				< TRANSISTOR >	
D302	8-719-016-74	DIODE 1SS352-TPH3		Q301	8-729-027-38	TRANSISTOR	DTA144EKA-T146
D303	8-719-977-13	DIODE DTZ-TT11-6.8C		Q302	8-729-900-53	TRANSISTOR	DTC114EKA-T146
D321	8-719-210-39	DIODE EC10QS04-TE12L5		Q303	8-729-027-38	TRANSISTOR	DTA144EKA-T146
		< GROUND TERMINAL >		Q351	8-729-120-28	TRANSISTOR	2SC1623-T1-L5L6
				Q403	8-729-141-74	TRANSISTOR	2SC3624A-T2L15L16
EB301	1-537-770-21	TERMINAL BOARD, GROUND					
		< IC >		Q503	8-729-141-74	TRANSISTOR	2SC3624A-T2L15L16
						< RESISTOR >	
IC301	8-759-653-12	IC CXD9556Q		R301	1-216-033-00	METAL CHIP	220 5% 1/10W
IC302	8-759-231-53	IC M5F7805L		△R302	1-212-857-00	FUSIBLE	10 5% 1/4W F

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

AUDIO

DISPLAY

Ref. No.	Part No.	Description			Remark
R303	1-216-097-00	RES-CHIP	100K	5%	1/10W
R304	1-216-097-00	RES-CHIP	100K	5%	1/10W
R305	1-216-105-00	RES-CHIP	220K	5%	1/10W
R306	1-216-033-00	METAL CHIP	220	5%	1/10W
R307	1-216-081-00	METAL CHIP	22K	5%	1/10W
R308	1-216-045-00	RES-CHIP	680	5%	1/10W
R309	1-216-105-00	RES-CHIP	220K	5%	1/10W
R310	1-216-025-00	RES-CHIP	100	5%	1/10W
R311	1-216-025-00	RES-CHIP	100	5%	1/10W
R312	1-216-295-00	SHORT	0		
R321	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R331	1-216-033-00	METAL CHIP	220	5%	1/10W
R332	1-216-033-00	METAL CHIP	220	5%	1/10W
R353	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R354	1-216-063-00	RES-CHIP	3.9K	5%	1/10W
R355	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R356	1-216-033-00	METAL CHIP	220	5%	1/10W
R357	1-216-021-00	METAL CHIP	68	5%	1/10W
R358	1-216-097-00	RES-CHIP	100K	5%	1/10W
R361	1-216-295-00	SHORT	0		
R371	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R373	1-216-041-00	METAL CHIP	470	5%	1/10W
R374	1-216-045-00	METAL CHIP	680	5%	1/10W
R375	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R376	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R392	1-216-041-00	METAL CHIP	470	5%	1/10W
R398	1-216-049-11	RES-CHIP	1K	5%	1/10W
R399	1-216-049-11	RES-CHIP	1K	5%	1/10W
R401	1-216-023-00	METAL CHIP	82	5%	1/10W
R402	1-216-017-91	METAL CHIP	47	5%	1/10W
R403	1-216-017-91	METAL CHIP	47	5%	1/10W
R404	1-216-023-00	METAL CHIP	82	5%	1/10W
R405	1-216-001-00	METAL CHIP	10	5%	1/10W
R406	1-216-001-00	METAL CHIP	10	5%	1/10W
R407	1-259-971-11	CARBON MELF	10	2%	1/8W
R408	1-259-971-11	CARBON MELF	10	2%	1/8W
R409	1-259-989-11	CARBON MELF	330	2%	1/8W
R410	1-259-989-11	CARBON MELF	330	2%	1/8W
R411	1-259-977-11	CARBON MELF	33	2%	1/8W
R412	1-259-977-11	CARBON MELF	33	2%	1/8W
R415	1-259-997-11	CARBON MELF	1.5K	2%	1/8W
R416	1-259-997-11	CARBON MELF	1.5K	2%	1/8W
R417	1-259-926-11	CARBON MELF	2K	2%	1/8W
R418	1-259-926-11	CARBON MELF	2K	2%	1/8W
R419	1-259-995-11	CARBON MELF	1K	2%	1/8W
R420	1-259-995-11	CARBON MELF	1K	2%	1/8W
R423	1-260-026-11	CARBON MELF	330K	2%	1/8W
R424	1-259-975-11	CARBON MELF	22	2%	1/8W
R426	1-259-971-11	CARBON MELF	10	2%	1/8W
R427	1-216-105-00	RES-CHIP	220K	5%	1/10W
R431	1-259-992-11	CARBON MELF	560	2%	1/8W
R432	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R451	1-216-085-00	METAL CHIP	33K	5%	1/10W
R452	1-216-104-00	METAL CHIP	200K	5%	1/10W
R453	1-216-107-00	METAL CHIP	270K	5%	1/10W
R454	1-216-119-00	METAL CHIP	820K	5%	1/10W
R455	1-216-019-00	METAL CHIP	56	5%	1/10W
R463	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R501	1-216-023-00	METAL CHIP	82	5%	1/10W
R502	1-216-017-91	METAL CHIP	47	5%	1/10W
R503	1-216-017-91	METAL CHIP	47	5%	1/10W
R504	1-216-023-00	METAL CHIP	82	5%	1/10W
R505	1-216-001-00	METAL CHIP	10	5%	1/10W
R506	1-216-001-00	METAL CHIP	10	5%	1/10W
R507	1-259-971-11	CARBON MELF	10	2%	1/8W
R508	1-259-971-11	CARBON MELF	10	2%	1/8W
R509	1-259-989-11	CARBON MELF	330	2%	1/8W
R510	1-259-989-11	CARBON MELF	330	2%	1/8W
R511	1-259-977-11	CARBON MELF	33	2%	1/8W
R512	1-259-977-11	CARBON MELF	33	2%	1/8W
R515	1-259-997-11	CARBON MELF	1.5K	2%	1/8W
R516	1-259-997-11	CARBON MELF	1.5K	2%	1/8W
R517	1-259-926-11	CARBON MELF	2K	2%	1/8W
R518	1-259-926-11	CARBON MELF	2K	2%	1/8W
R519	1-259-995-11	CARBON MELF	1K	2%	1/8W
R520	1-259-995-11	CARBON MELF	1K	2%	1/8W
R523	1-260-026-11	CARBON MELF	330K	2%	1/8W
R524	1-259-975-11	CARBON MELF	22	2%	1/8W
R526	1-259-971-11	CARBON MELF	10	2%	1/8W
R527	1-216-105-00	RES-CHIP	220K	5%	1/10W
R531	1-259-992-11	CARBON MELF	560	2%	1/8W
R532	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R551	1-216-085-00	METAL CHIP	33K	5%	1/10W
R552	1-216-104-00	METAL CHIP	200K	5%	1/10W
R553	1-216-107-00	METAL CHIP	270K	5%	1/10W
R554	1-216-119-00	METAL CHIP	820K	5%	1/10W
R555	1-216-019-00	METAL CHIP	56	5%	1/10W
R563	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R1001	1-216-295-00	SHORT	0		
R1002	1-216-001-00	METAL CHIP	10	5%	1/10W
R1003	1-216-295-00	SHORT	0		
		< RELAY >			
RY301	1-755-295-11	RELAY			
		< VIBRATOR >			
X321	1-760-955-11	VIBRATOR, CRYSTAL (45MHz)			

	A-4725-091-A	DISPLAY BOARD, COMPLETE			

	3-350-124-11	CUSHION (EJECT)			
		< CAPACITOR >			
C201	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C202	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C203	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C204	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C205	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C206	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C207	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C208	1-126-177-11	ELECT	100uF	20%	10V
C209	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C210	1-163-038-00	CERAMIC CHIP	0.1uF		25V

43

Ref. No.	Part No.	Description	Remark		
L609	1-414-180-11	INDUCTOR	3.3uH		
L610	1-414-180-11	INDUCTOR	3.3uH		
< VARIABLE RESISTOR >					
RV601	1-227-185-11	RES, VAR, CARBON 1K/1K (PHONE LEVEL)			

	1-674-336-11	LOADING BOARD			

< CONNECTOR >					
* CN151	1-568-943-11	PIN, CONNECTOR 5P			
< SWITCH >					
S1	1-771-799-11	SWITCH, LEVER (SLIDE) (OPEN/CLOSE)			

	A-4725-086-A	MAIN BOARD, COMPLETE			

< CAPACITOR >					
C606	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C607	1-126-246-11	ELECT CHIP	220uF	20%	4V
C608	1-126-246-11	ELECT CHIP	220uF	20%	4V
C609	1-115-156-11	CERAMIC CHIP	1uF		10V
C612	1-126-246-11	ELECT CHIP	220uF	20%	4V
C614	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C616	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C617	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C618	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C619	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C620	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C621	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C624	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C625	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C626	1-115-156-11	CERAMIC CHIP	1uF		10V
C627	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C628	1-125-822-11	TANTALUM	10uF	20%	10V
C629	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C630	1-125-822-11	TANTALUM	10uF	20%	10V
C631	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C632	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C633	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C634	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C635	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C636	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C637	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C638	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C639	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C640	1-125-822-11	TANTALUM	10uF	20%	10V
C641	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C642	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C643	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C644	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C645	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C646	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C647	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C650	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

Ref. No.	Part No.	Description	Remark		
C651	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C652	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C653	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C654	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C655	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C656	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C657	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C658	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C659	1-125-822-11	TANTALUM	10uF	20%	10V
C660	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C661	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C662	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C663	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C664	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C665	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C666	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C667	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C668	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C669	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C670	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C671	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C672	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C673	1-124-779-00	ELECT CHIP	10uF	20%	16V
C674	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C675	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C676	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C677	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C680	1-117-681-11	ELECT CHIP	100uF	20%	16V
C681	1-117-681-11	ELECT CHIP	100uF	20%	16V
C682	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C683	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C684	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C685	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C686	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C687	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C688	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C689	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C690	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C691	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C692	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C693	1-125-822-11	TANTALUM	10uF	20%	10V
C694	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C695	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C696	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C697	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C698	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C700	1-107-548-11	ELECT CHIP	22uF	20%	16V
C701	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C702	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C703	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C704	1-124-779-00	ELECT CHIP	10uF	20%	16V
C705	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C706	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C707	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C708	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C709	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C710	1-125-822-11	TANTALUM	10uF	20%	10V
C711	1-162-927-11	CERAMIC CHIP	100PF	5%	50V

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark
C712	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	CN610	1-794-296-11	PIN, CONNECTOR (PC BOARD) 6P	
C713	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	CN611	1-784-375-21	CONNECTOR, FFC/FPC 16P	
C714	1-125-822-11	TANTALUM	10uF	20%	10V	< DIODE >			
C715	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	D600	8-719-988-61	DIODE 1SS355TE-17	
C716	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	D604	8-719-988-61	DIODE 1SS355TE-17	
C717	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	D605	8-719-941-86	DIODE DAN202UT106	
C718	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	D606	8-719-941-86	DIODE DAN202UT106	
C719	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	D607	8-719-988-61	DIODE 1SS355TE-17	
C720	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	D608	8-719-941-09	DIODE DAP202UT106	
C721	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	D609	8-719-941-09	DIODE DAP202UT106	
C722	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	D610	8-719-988-61	DIODE 1SS355TE-17	
C723	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	D612	8-719-988-61	DIODE 1SS355TE-17	
C724	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	< FERRITE BEAD >			
C725	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	FB600	1-500-283-11	FERRITE BEAD	
C726	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	FB601	1-500-283-11	FERRITE BEAD	
C727	1-126-206-11	ELECT CHIP	100uF	20%	6.3V	FB604	1-500-283-11	FERRITE BEAD	
C728	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	FB605	1-500-283-11	FERRITE BEAD	
C729	1-125-822-11	TANTALUM	10uF	20%	10V	FB606	1-500-283-11	FERRITE BEAD	
C730	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB607	1-500-283-11	FERRITE BEAD	
C731	1-125-822-11	TANTALUM	10uF	20%	10V	FB608	1-500-283-11	FERRITE BEAD	
C732	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB609	1-500-283-11	FERRITE BEAD	
C733	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	FB610	1-500-283-11	FERRITE BEAD	
C734	1-125-822-11	TANTALUM	10uF	20%	10V	FB611	1-500-283-11	FERRITE BEAD	
C735	1-125-822-11	TANTALUM	10uF	20%	10V	FB612	1-500-283-11	FERRITE BEAD	
C736	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB613	1-500-283-11	FERRITE BEAD	
C737	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB615	1-500-283-11	FERRITE BEAD	
C738	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB616	1-500-283-11	FERRITE BEAD	
C739	1-162-945-11	CERAMIC CHIP	22PF	5%	50V	FB617	1-500-283-11	FERRITE BEAD	
C740	1-162-945-11	CERAMIC CHIP	22PF	5%	50V	FB618	1-500-283-11	FERRITE BEAD	
C741	1-162-945-11	CERAMIC CHIP	22PF	5%	50V	FB619	1-500-283-11	FERRITE BEAD	
C742	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB620	1-500-283-11	FERRITE BEAD	
C743	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB621	1-500-283-11	FERRITE BEAD	
C744	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FB636	1-500-283-11	FERRITE BEAD	
C745	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	< EMI FILTER >			
C746	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FL600	1-234-177-21	FILTER, CHIP EMI	
C747	1-125-822-11	TANTALUM	10uF	20%	10V	FL601	1-234-177-21	FILTER, CHIP EMI	
C748	1-125-822-11	TANTALUM	10uF	20%	10V	FL603	1-234-177-21	FILTER, CHIP EMI	
C749	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FL604	1-234-177-21	FILTER, CHIP EMI	
C751	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FL605	1-234-177-21	FILTER, CHIP EMI	
C752	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	FL606	1-233-893-21	FILTER, CHIP EMI	
C753	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FL607	1-234-177-21	FILTER, CHIP EMI	
C754	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FL608	1-234-177-21	FILTER, CHIP EMI	
C755	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FL610	1-234-177-21	FILTER, CHIP EMI	
C756	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FL611	1-234-177-21	FILTER, CHIP EMI	
C757	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FL612	1-233-893-21	FILTER, CHIP EMI	
C759	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FL613	1-234-177-21	FILTER, CHIP EMI	
C760	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	FL614	1-234-177-21	FILTER, CHIP EMI	
C762	1-164-346-11	CERAMIC CHIP	1uF		16V	FL616	1-234-177-21	FILTER, CHIP EMI	
C763	1-164-346-11	CERAMIC CHIP	1uF		16V	FL617	1-239-400-11	FILTER, CHIP EMI	
< CONNECTOR >						FL618	1-234-177-21	FILTER, CHIP EMI	
CN600	1-790-675-11	PIN, CONNECTOR (PC BOARD) 7P				FL619	1-239-400-11	FILTER, CHIP EMI	
CN601	1-784-369-21	CONNECTOR, FFC/FPC 10P				FL620	1-234-177-21	FILTER, CHIP EMI	
CN602	1-793-990-11	CONNECTOR, FFC/FPC 18P				FL621	1-234-177-21	FILTER, CHIP EMI	
CN603	1-793-990-11	CONNECTOR, FFC/FPC 18P				FL622	1-234-177-21	FILTER, CHIP EMI	
CN605	1-790-669-21	PIN, CONNECTOR (PC BOARD) 9P				FL623	1-234-177-21	FILTER, CHIP EMI	
CN608	1-784-375-21	CONNECTOR, FFC/FPC 16P							

MAIN

46

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R706	1-216-833-11	RES-CHIP	10K	5%	1/16W	R775	1-216-844-11	METAL CHIP	82K	5%	1/16W
R707	1-216-821-11	METAL CHIP	1K	5%	1/16W	R776	1-216-843-11	METAL CHIP	68K	5%	1/16W
R708	1-216-821-11	METAL CHIP	1K	5%	1/16W	R777	1-216-837-11	METAL CHIP	22K	5%	1/16W
R709	1-216-821-11	METAL CHIP	1K	5%	1/16W	R778	1-216-837-11	METAL CHIP	22K	5%	1/16W
R711	1-216-821-11	METAL CHIP	1K	5%	1/16W	R779	1-216-833-11	RES-CHIP	10K	5%	1/16W
R712	1-216-833-11	RES-CHIP	10K	5%	1/16W	R780	1-216-833-11	RES-CHIP	10K	5%	1/16W
R713	1-216-833-11	RES-CHIP	10K	5%	1/16W	R781	1-216-851-11	METAL CHIP	330K	5%	1/16W
R719	1-216-821-11	METAL CHIP	1K	5%	1/16W	R782	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R720	1-216-817-11	METAL CHIP	470	5%	1/16W	R783	1-216-833-11	RES-CHIP	10K	5%	1/16W
R721	1-216-817-11	METAL CHIP	470	5%	1/16W	R784	1-216-833-11	RES-CHIP	10K	5%	1/16W
R722	1-216-817-11	METAL CHIP	470	5%	1/16W	R785	1-216-833-11	RES-CHIP	10K	5%	1/16W
R723	1-216-817-11	METAL CHIP	470	5%	1/16W	R786	1-216-841-11	METAL CHIP	47K	5%	1/16W
R724	1-216-864-11	METAL CHIP	0	5%	1/16W	R787	1-216-843-11	METAL CHIP	68K	5%	1/16W
R725	1-216-844-11	METAL CHIP	82K	5%	1/16W	R788	1-216-843-11	METAL CHIP	68K	5%	1/16W
R726	1-216-844-11	METAL CHIP	82K	5%	1/16W	R789	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R727	1-216-844-11	METAL CHIP	82K	5%	1/16W	R790	1-218-897-11	METAL CHIP	120K	0.5%	1/16W
R728	1-216-844-11	METAL CHIP	82K	5%	1/16W	R791	1-216-852-11	METAL CHIP	390K	5%	1/16W
R729	1-216-833-11	RES-CHIP	10K	5%	1/16W	R792	1-216-845-11	METAL CHIP	100K	5%	1/16W
R730	1-216-839-11	METAL CHIP	33K	5%	1/16W	R793	1-216-840-11	METAL CHIP	39K	5%	1/16W
R731	1-216-833-11	RES-CHIP	10K	5%	1/16W	R794	1-216-844-11	METAL CHIP	82K	5%	1/16W
R733	1-216-815-11	METAL CHIP	330	5%	1/16W	R795	1-216-844-11	METAL CHIP	82K	5%	1/16W
R734	1-216-836-11	METAL CHIP	18K	5%	1/16W	R796	1-216-833-11	RES-CHIP	10K	5%	1/16W
R735	1-216-834-11	METAL CHIP	12K	5%	1/16W	R797	1-216-833-11	RES-CHIP	10K	5%	1/16W
R739	1-216-833-11	RES-CHIP	10K	5%	1/16W	R798	1-216-852-11	METAL CHIP	390K	5%	1/16W
R740	1-216-833-11	RES-CHIP	10K	5%	1/16W	R799	1-216-845-11	METAL CHIP	100K	5%	1/16W
R741	1-216-833-11	RES-CHIP	10K	5%	1/16W	R800	1-216-836-11	METAL CHIP	18K	5%	1/16W
R742	1-216-833-11	RES-CHIP	10K	5%	1/16W	R801	1-216-833-11	RES-CHIP	10K	5%	1/16W
R744	1-216-833-11	RES-CHIP	10K	5%	1/16W	R802	1-216-833-11	RES-CHIP	10K	5%	1/16W
R745	1-216-833-11	RES-CHIP	10K	5%	1/16W	R803	1-216-851-11	METAL CHIP	330K	5%	1/16W
R746	1-216-817-11	METAL CHIP	470	5%	1/16W	R804	1-216-849-11	METAL CHIP	220K	5%	1/16W
R747	1-216-815-11	METAL CHIP	330	5%	1/16W	R805	1-216-833-11	RES-CHIP	10K	5%	1/16W
R748	1-216-809-11	METAL CHIP	100	5%	1/16W	R806	1-218-897-11	METAL CHIP	120K	0.5%	1/16W
R749	1-216-821-11	METAL CHIP	1K	5%	1/16W	R807	1-216-833-11	RES-CHIP	10K	5%	1/16W
R750	1-216-833-11	RES-CHIP	10K	5%	1/16W	R808	1-218-907-11	METAL CHIP	330K	0.5%	1/16W
R751	1-218-889-11	METAL CHIP	56K	0.5%	1/16W	R810	1-218-907-11	METAL CHIP	330K	0.5%	1/16W
R752	1-218-899-11	METAL CHIP	150K	0.5%	1/16W	R811	1-216-833-11	RES-CHIP	10K	5%	1/16W
R753	1-218-899-11	METAL CHIP	150K	0.5%	1/16W	R812	1-216-809-11	METAL CHIP	100	5%	1/16W
R754	1-218-889-11	METAL CHIP	56K	0.5%	1/16W	R813	1-216-815-11	METAL CHIP	330	5%	1/16W
R755	1-216-840-11	METAL CHIP	39K	5%	1/16W	R814	1-216-815-11	METAL CHIP	330	5%	1/16W
R756	1-216-840-11	METAL CHIP	39K	5%	1/16W	R815	1-216-833-11	RES-CHIP	10K	5%	1/16W
R757	1-216-835-11	METAL CHIP	15K	5%	1/16W	R818	1-216-805-11	METAL CHIP	47	5%	1/16W
R758	1-216-835-11	METAL CHIP	15K	5%	1/16W	R819	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R759	1-216-833-11	RES-CHIP	10K	5%	1/16W	R820	1-216-845-11	METAL CHIP	100K	5%	1/16W
R760	1-216-841-11	METAL CHIP	47K	5%	1/16W	R821	1-216-805-11	METAL CHIP	47	5%	1/16W
R761	1-216-841-11	METAL CHIP	47K	5%	1/16W	R822	1-216-809-11	METAL CHIP	100	5%	1/16W
R762	1-216-844-11	METAL CHIP	82K	5%	1/16W	R823	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R763	1-216-844-11	METAL CHIP	82K	5%	1/16W	R824	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R764	1-216-841-11	METAL CHIP	47K	5%	1/16W	R825	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R765	1-216-841-11	METAL CHIP	47K	5%	1/16W	R826	1-216-809-11	METAL CHIP	100	5%	1/16W
R766	1-216-833-11	RES-CHIP	10K	5%	1/16W	R827	1-216-838-11	METAL CHIP	27K	5%	1/16W
R767	1-216-847-11	METAL CHIP	150K	5%	1/16W	R828	1-216-836-11	METAL CHIP	18K	5%	1/16W
R768	1-216-847-11	METAL CHIP	150K	5%	1/16W	R829	1-216-803-11	METAL CHIP	33	5%	1/16W
R769	1-216-847-11	METAL CHIP	150K	5%	1/16W	R830	1-218-875-11	METAL CHIP	15K	0.5%	1/16W
R770	1-216-296-00	SHORT	0			R831	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R771	1-216-138-00	METAL CHIP	3.3	5%	1/8W	R832	1-218-831-11	METAL CHIP	220	0.5%	1/16W
R772	1-216-848-11	METAL CHIP	180K	5%	1/16W	R833	1-216-821-11	METAL CHIP	1K	5%	1/16W
R773	1-216-848-11	METAL CHIP	180K	5%	1/16W	R834	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R774	1-216-848-11	METAL CHIP	180K	5%	1/16W						

MAIN

POWER

Ref. No.	Part No.	Description	Remark		
R835	1-216-838-11	METAL CHIP	27K	5%	1/16W
R836	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R838	1-216-809-11	METAL CHIP	100	5%	1/16W
R839	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R840	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R841	1-218-847-11	METAL CHIP	1K	0.5%	1/16W
R842	1-218-855-11	METAL CHIP	2.2K	0.5%	1/16W
R843	1-218-855-11	METAL CHIP	2.2K	0.5%	1/16W
R844	1-218-855-11	METAL CHIP	2.2K	0.5%	1/16W
R845	1-216-833-11	RES-CHIP	10K	5%	1/16W
R847	1-216-833-11	RES-CHIP	10K	5%	1/16W
R848	1-216-833-11	RES-CHIP	10K	5%	1/16W
R849	1-216-801-11	METAL CHIP	22	5%	1/16W
R850	1-216-801-11	METAL CHIP	22	5%	1/16W
R851	1-216-801-11	METAL CHIP	22	5%	1/16W
R852	1-218-853-11	METAL CHIP	1.8K	0.5%	1/16W
R853	1-216-813-11	METAL CHIP	220	5%	1/16W
R854	1-216-813-11	METAL CHIP	220	5%	1/16W
R855	1-216-805-11	METAL CHIP	47	5%	1/16W
R856	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R857	1-216-849-11	METAL CHIP	220K	5%	1/16W
R858	1-216-819-11	METAL CHIP	680	5%	1/16W
R859	1-216-819-11	METAL CHIP	680	5%	1/16W
R860	1-216-819-11	METAL CHIP	680	5%	1/16W
R861	1-216-833-11	RES-CHIP	10K	5%	1/16W
R862	1-216-801-11	METAL CHIP	22	5%	1/16W
R863	1-216-801-11	METAL CHIP	22	5%	1/16W
R864	1-216-801-11	METAL CHIP	22	5%	1/16W
R865	1-216-801-11	METAL CHIP	22	5%	1/16W
R866	1-216-801-11	METAL CHIP	22	5%	1/16W
R867	1-216-801-11	METAL CHIP	22	5%	1/16W
R868	1-216-801-11	METAL CHIP	22	5%	1/16W
R869	1-216-801-11	METAL CHIP	22	5%	1/16W
R870	1-216-805-11	METAL CHIP	47	5%	1/16W
R871	1-216-809-11	METAL CHIP	100	5%	1/16W
R873	1-216-833-11	RES-CHIP	10K	5%	1/16W
R876	1-216-833-11	RES-CHIP	10K	5%	1/16W
R878	1-216-821-11	METAL CHIP	1K	5%	1/16W
R881	1-216-821-11	METAL CHIP	1K	5%	1/16W
R882	1-216-821-11	METAL CHIP	1K	5%	1/16W
R883	1-216-821-11	METAL CHIP	1K	5%	1/16W
R885	1-216-833-11	RES-CHIP	10K	5%	1/16W
R886	1-216-833-11	RES-CHIP	10K	5%	1/16W
R887	1-216-833-11	RES-CHIP	10K	5%	1/16W
R889	1-216-833-11	RES-CHIP	10K	5%	1/16W
R890	1-216-833-11	RES-CHIP	10K	5%	1/16W
R895	1-216-809-11	METAL CHIP	100	5%	1/16W
R897	1-216-833-11	RES-CHIP	10K	5%	1/16W
R898	1-216-809-11	METAL CHIP	100	5%	1/16W
R899	1-216-809-11	METAL CHIP	100	5%	1/16W
R901	1-216-833-11	RES-CHIP	10K	5%	1/16W
R902	1-216-833-11	RES-CHIP	10K	5%	1/16W
R903	1-216-833-11	RES-CHIP	10K	5%	1/16W
R904	1-216-833-11	RES-CHIP	10K	5%	1/16W
R905	1-216-833-11	RES-CHIP	10K	5%	1/16W
R906	1-216-833-11	RES-CHIP	10K	5%	1/16W
R908	1-216-803-11	METAL CHIP	33	5%	1/16W
R909	1-216-815-11	METAL CHIP	330	5%	1/16W

Ref. No.	Part No.	Description	Remark		
R910	1-216-803-11	METAL CHIP	33	5%	1/16W
R911	1-216-803-11	METAL CHIP	33	5%	1/16W
R912	1-216-833-11	RES-CHIP	10K	5%	1/16W
R913	1-216-296-00	SHORT	0		
R914	1-216-833-11	RES-CHIP	10K	5%	1/16W
R916	1-216-864-11	METAL CHIP	0	5%	1/16W
R918	1-216-833-11	RES-CHIP	10K	5%	1/16W
R919	1-216-833-11	RES-CHIP	10K	5%	1/16W
R920	1-216-805-11	METAL CHIP	47	5%	1/16W
R921	1-216-805-11	METAL CHIP	47	5%	1/16W
< COMPOSITION CIRCUIT BLOCK >					
* RB601	1-233-270-11	NETWORK, RES (8 GANG) 10K			
* RB602	1-233-270-11	NETWORK, RES (8 GANG) 10K			
* RB603	1-233-270-11	NETWORK, RES (8 GANG) 10K			
< CHECKER TERMINAL >					
TP600	1-535-757-11	CHIP, CHECKER			
TP602	1-535-757-11	CHIP, CHECKER			
TP603	1-535-757-11	CHIP, CHECKER			
TP608	1-535-757-11	CHIP, CHECKER			
TP609	1-535-757-11	CHIP, CHECKER			
TP613	1-535-757-11	CHIP, CHECKER			
< VIBRATOR >					
X600	1-781-185-21	VIBRATOR, CERAMIC (12.5MHz)			
X601	1-781-408-11	VIBRATOR, CERAMIC (27MHz)			

A-4725-090-A	POWER BOARD, COMPLETE (AEP)				
A-4725-212-A	POWER BOARD, COMPLETE (UK)				

7-685-871-01	SCREW +BVTT 3X6 (S)				
< CAPACITOR >					
C901	1-110-578-11	ELECT (BLOCK)	3300uF	20%	25V
C902	1-110-578-11	ELECT (BLOCK)	3300uF	20%	25V
C903	1-126-017-11	ELECT	6800uF	20%	16V
C904	1-126-939-11	ELECT	10000uF	20%	16V
C905	1-111-235-61	ELECT	10000uF	20%	25V
C906	1-126-065-11	ELECT	330uF	20%	63V
C907	1-126-064-11	ELECT	220uF	20%	63V
C908	1-136-177-00	MYLAR	1uF	5%	50V
C909	1-136-177-00	MYLAR	1uF	5%	50V
C913	1-124-703-51	ELECT	2200uF	20%	25V
C914	1-126-768-11	ELECT	2200uF	20%	16V
C915	1-126-943-11	ELECT	2200uF	20%	25V
C916	1-126-964-11	ELECT	10uF	20%	50V
C917	1-136-850-11	MYLAR	0.1uF	5%	63V
C920	1-136-177-00	MYLAR	1uF	5%	50V
C921	1-137-352-11	MYLAR	0.033uF	5%	100V
C922	1-137-352-11	MYLAR	0.033uF	5%	100V
C923	1-136-850-11	MYLAR	0.1uF	5%	63V
C924	1-126-768-11	ELECT	2200uF	20%	16V
C925	1-136-177-00	MYLAR	1uF	5%	50V
C926	1-126-964-11	ELECT	10uF	20%	50V
C927	1-126-943-11	ELECT	2200uF	20%	25V

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
C928	1-136-177-00	MYLAR	1uF	5%	50V		L907	1-424-122-11	FILTER, NOISE				
C971	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V		L908	1-424-122-11	FILTER, NOISE				
C972	1-136-161-00	MYLAR	0.047uF	5%	50V		< TRANSISTOR >						
C973	1-136-161-00	MYLAR	0.047uF	5%	50V		Q921	8-729-041-38	TRANSISTOR	2SB1241TV2Q			
C974	1-136-161-00	MYLAR	0.047uF	5%	50V		< RESISTOR >						
C975	1-136-161-00	MYLAR	0.047uF	5%	50V		△R901	1-217-796-11	FUSIBLE	33	5%	5W	F
C976	1-136-161-00	MYLAR	0.047uF	5%	50V		R902	1-216-295-00	SHORT	0			
C977	1-136-161-00	MYLAR	0.047uF	5%	50V		R921	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
C978	1-136-161-00	MYLAR	0.047uF	5%	50V		R922	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
C991	1-130-471-00	MYLAR	0.001uF	5%	50V		R923	1-216-174-00	RES-CHIP	100	5%	1/8W	
C992	1-130-471-00	MYLAR	0.001uF	5%	50V		R925	1-216-174-00	RES-CHIP	100	5%	1/8W	
C993	1-130-471-00	MYLAR	0.001uF	5%	50V		R926	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
< CONNECTOR >							R927	1-216-109-00	METAL CHIP	330K	5%	1/10W	
CN903	1-691-765-11	PLUG (MICRO CONNECTOR) 3P					R951	1-216-295-00	SHORT	0			
* CN904	1-568-936-11	PIN, CONNECTOR 9P					R952	1-216-295-00	SHORT	0			
* CN905	1-568-955-11	PIN, CONNECTOR 6P					R953	1-216-295-00	SHORT	0			
< DIODE >							△R954	1-212-869-00	FUSIBLE	33	5%	1/4W	F
D901	8-719-210-39	DIODE EC10QS04-TE12L5					R955	1-216-295-00	SHORT	0			
D902	8-719-210-39	DIODE EC10QS04-TE12L5					*****						
D903	8-719-210-39	DIODE EC10QS04-TE12L5					A-4725-072-A TK BOARD, COMPLETE						
D904	8-719-210-39	DIODE EC10QS04-TE12L5					*****						
D905	8-719-210-33	DIODE EC10DS2TE12L					< CAPACITOR >						
D906	8-719-210-33	DIODE EC10DS2TE12L					C004	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
D907	8-719-210-33	DIODE EC10DS2TE12L					C005	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
D908	8-719-210-33	DIODE EC10DS2TE12L					C006	1-125-822-11	TANTALUM	10uF	20%	10V	
D909	8-719-210-39	DIODE EC10QS04-TE12L5					C007	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
D910	8-719-210-39	DIODE EC10QS04-TE12L5					C008	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
D911	8-719-210-39	DIODE EC10QS04-TE12L5					C009	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
D912	8-719-210-39	DIODE EC10QS04-TE12L5					C010	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
D913	8-719-210-39	DIODE EC10QS04-TE12L5					C011	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
D914	8-719-210-39	DIODE EC10QS04-TE12L5					C012	1-125-822-11	TANTALUM	10uF	20%	10V	
D915	8-719-210-39	DIODE EC10QS04-TE12L5					C013	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
D916	8-719-210-39	DIODE EC10QS04-TE12L5					C014	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
D917	8-719-210-33	DIODE EC10DS2TE12L					C015	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
D918	8-719-210-33	DIODE EC10DS2TE12L					C016	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
D919	8-719-210-33	DIODE EC10DS2TE12L					C017	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V	
D920	8-719-210-33	DIODE EC10DS2TE12L					C018	1-164-739-11	CERAMIC CHIP	560PF	5%	50V	
D921	8-719-978-98	DIODE DTZ-TT11-33C					C019	1-164-172-11	CERAMIC CHIP	0.0056uF	10%	25V	
D922	8-719-977-22	DIODE UDZ-TE-17-9.1B					C020	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
< GROUND TERMINAL >							C021	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
EB901	1-537-770-21	TERMINAL BOARD, GROUND					C022	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
< IC >							C023	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
IC903	8-759-450-47	IC BA05T					C024	1-164-730-11	CERAMIC CHIP	0.0012uF	10%	50V	
IC904	8-759-445-59	IC BA033T					C025	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	
IC905	8-759-394-35	IC BA12T					C026	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
IC906	8-759-450-47	IC BA05T					C027	1-164-217-11	CERAMIC CHIP	150PF	5%	50V	
IC907	8-759-394-35	IC BA12T					C028	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
< NOISE FILTER >							C029	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
L902	1-424-122-11	FILTER, NOISE					C030	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
L903	1-424-122-11	FILTER, NOISE					C031	1-125-822-11	TANTALUM	10uF	20%	10V	
L904	1-424-122-11	FILTER, NOISE					C032	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
L905	1-424-122-11	FILTER, NOISE					C033	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	
L906	1-424-122-11	FILTER, NOISE					C034	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

TK

TRANSFORMER

Ref. No.	Part No.	Description	Remark		
C035	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C036	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C037	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C038	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C039	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C040	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C041	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
< CONNECTOR >					
CN001	1-573-363-21	CONNECTOR, FFC/FPC 23P			
CN002	1-566-529-11	CONNECTOR, FPC (ZIF) 13P			
CN003	1-784-870-21	CONNECTOR, FFC (LIF (NON-ZIF))18P			
CN004	1-784-870-21	CONNECTOR, FFC (LIF (NON-ZIF))18P			
< DIODE >					
D003	8-719-988-61	DIODE 1SS355TE-17			
< IC >					
IC001	8-759-567-24	IC SSI33P3722			
< COIL >					
L001	1-412-031-11	INDUCTOR CHIP 47uH			
< TRANSISTOR >					
Q001	8-729-903-46	TRANSISTOR		2SB1132-T100-QR	
Q002	8-729-015-76	TRANSISTOR		UN5211-TX	
< RESISTOR >					
R001	1-216-815-11	METAL CHIP	330	5%	1/16W
R002	1-216-809-11	METAL CHIP	100	5%	1/16W
R003	1-216-809-11	METAL CHIP	100	5%	1/16W
R004	1-216-837-11	METAL CHIP	22K	5%	1/16W
R005	1-216-013-00	METAL CHIP	33	5%	1/10W
R006	1-216-013-00	METAL CHIP	33	5%	1/10W
R007	1-216-841-11	METAL CHIP	47K	5%	1/16W
R008	1-216-797-11	METAL CHIP	10	5%	1/16W
R009	1-216-834-11	METAL CHIP	12K	5%	1/16W
R010	1-216-833-11	RES-CHIP	10K	5%	1/16W
R012	1-216-864-11	METAL CHIP	0	5%	1/16W
R014	1-216-864-11	METAL CHIP	0	5%	1/16W
R015	1-216-833-11	RES-CHIP	10K	5%	1/16W
R016	1-216-833-11	RES-CHIP	10K	5%	1/16W
R017	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R018	1-216-833-11	RES-CHIP	10K	5%	1/16W
R022	1-216-811-11	METAL CHIP	150	5%	1/16W
R023	1-216-820-11	METAL CHIP	820	5%	1/16W
R025	1-216-813-11	METAL CHIP	220	5%	1/16W
R026	1-216-864-11	METAL CHIP	0	5%	1/16W
R029	1-216-861-11	METAL CHIP	2.2M	5%	1/16W

	1-677-732-11	TRANSFORMER BOARD			

< CAPACITOR >					
△ C995	1-113-927-11	CERAMIC	10000PF	20%	250V
△ C996	1-113-927-11	CERAMIC	10000PF	20%	250V

Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
△ CN991	1-573-047-11	PIN, CONNECTOR (PC BOARD) 2P	
CN992	1-568-226-11	PIN, CONNECTOR 2P	
* CN993	1-564-520-11	PLUG, CONNECTOR 5P	
* CN994	1-564-523-11	PLUG, CONNECTOR 8P	
< LINE FILTER >			
△ L901	1-424-485-11	FILTER, LINE	

MISCELLANEOUS			

6	1-792-598-11	WIRE (FLAT TYPE) (10 CORE)	
104	1-792-600-11	WIRE (FLAT TYPE) (18 CORE)	
106	1-543-653-11	CORE ASSY, BEAD (DIVISION TYPE)	
109	1-792-599-11	WIRE (FLAT TYPE) (16 CORE)	
△ 113	1-558-568-21	CORD, POWER (AEP)	
△ 113	1-696-586-11	CORD, POWER (UK)	
△ 166	A-6062-397-A	OPTICAL PICK-UP KHM-220AAA	
M1	A-4672-771-A	MOTOR (LD) ASSY (LOADING)	
△ T901	1-435-459-11	TRANSFORMER, POWER (DIGITAL)	
△ T902	1-435-460-11	TRANSFORMER, POWER (ANALOG)	

HARDWARE LIST			

#1	7-685-885-09	SCREW +BVTT 4X16 (S)	
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#3	7-685-871-01	SCREW +BVTT 3X6 (S)	
#4	7-685-870-01	SCREW +BVTT 3X5 (S)	
#5	7-685-872-09	SCREW +BVTT 3X8 (S)	
#6	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	

ACCESSORIES & PACKING MATERIALS			

1-418-994-11	REMOTE COMMANDER (RM-SX90)		
1-590-925-31	CORD, CONNECTION		
4-227-858-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH)		
4-227-858-21	MANUAL, INSTRUCTION		
	(GERMAN, SPANISH, DUTCH) (AEP)		
4-227-858-31	MANUAL, INSTRUCTION		
	(SWEDISH, ITALIAN, PORTUGUESE) (AEP)		
4-983-956-01	COVER, BATTERY (for RM-SX90)		

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

SCD-XB940

SONY®

*AEP Model
UK Model*

SERVICE MANUAL

SUPPLEMENT-1

File this supplement with the service manual.

Subject:

1. Addition of Test Mode
2. Addition of Block Diagram and IC Pin Function Description

TABLE OF CONTENTS

1. TEST MODE	2
2. DIAGRAMS	
2-1. Block Diagram – RF/SERVO Section –	9
2-2. Block Diagram – MAIN Section (1/2) –	10
2-3. Block Diagram – MAIN Section (2/2) –	11
2-4. Block Diagram – AUDIO Section –	12
2-5. Block Diagram – DISPLAY/POWER SUPPLY Section –	13
2-6. IC Pin Function Description	14

1. TEST MODE

Jigs

- Disc

Model	Type *1	Category	Application
HLX-503/ HLX-504	SL	12 cm	adjustment and check
HLX-501/ HLX-505	DL	12 cm	adjustment and check
PATD-012	CD	12 cm	adjustment and check
*2	HYBRID -L1	12 cm	adjustment and check
	HYBRID -L0	12 cm	adjustment and check
	SL	8 cm	Check
	CD	8 cm	Check
	HYBRID -L1	8 cm	Check

*1 SL: Single Layer

DL: Dual Layer

*2 Normally do not use.

- Remote Commander
- Extension cable (MAIN board (CN601) ↔ DISPLAY board (CN202)) (Part No. J-2501-195-A)

How to Enter the Test Mode

With  controller pressed, turn the **POWER** switch ON. Then, immediately press  button. If  button is not pressed, the set will start in normal mode. When the Test mode is activated, “Test Mode Menu” is displayed.

How to Exit the Test Mode

Turn the **POWER** switch OFF, and the Test mode is deactivated.

Selection of Test Mode

To select “Test Mode Menu”, perform as follows.

- (1) Rotating  controller, select the menu and press  controller to enter. (If the remote commander is available, select and enter the number directly.)
- (2) To return to the previous step, press  button.

Contents of “Test Mode Menu”

DISPLAY	Contents of Menu
0. Syscon Diag	Self diagnosis
1. Auto Adjust	Servo adjustment (Auto)
2. Manual Opr	Manual operation adjustment
3. Mecha Aging	Mechanism aging
4. Emg History	Servo emergency history information display
5. Ver Info	Version information display
6. RF Jit Disp	RF jitter measured value display
7. PDM Mode	Normally do not use
8. CDM Adjust	Normally do not use
9. Set Up Init	Initializing and restart
10. Sld Ship Pos	Sled ship position

Execution of Test Mode Menu

0. Syscon Diag menu

From the “Test Mode Menu”, rotate  controller counterclockwise to select “0. Syscon Diag”. Press  controller, and “SELF DIAG Menu” will be displayed. Rotating

 controller can select the following menu.

DISPLAY	Contents of Menu
0. All (SELF)	Self diagnosis of all items 1. – 7.
1. SRAM	Self diagnosis of SRAM
2. EEPROM	Self diagnosis of EEPROM
3. HGA	Self diagnosis of HGA
4. Servo DSP	Self diagnosis of servo DSP
5. ARP	Self diagnosis of ARP
6. SACD Chip	Self diagnosis of SACD chip
7. SD Bus	Self diagnosis of SD Bus
8. Diag Hist	Self diagnosis emergency history display

(1) 0. All (SELF)

From the “SELF DIAG Menu” display, rotate  controller clockwise to select “0. All (SELF)”, and press  controller. Then, the self diagnosis of items 1. –7. will be executed in the following order. At successful completion, “All Success” is displayed and the set returns to the first step.

“0. All (SELF)” → “SRAM Check” → “ExSRAM Start” → “ExRAM OK” → “EEPROM Check” → “EEPROM Start” → “Check 00” → “Check 10” → “Check 20” → “Check 30” → “Check 40” → “Check 50” → “Check 60” → “Check 70” → “Check 80” → “Check 90” → “Check A0” → “Check B0” → “Check C0” → “Check D0” → “Check E0” → “Check F0” → “EEPROM OK” → “HGA Check” → “HGA Start” → “HGA OK” → “Servo DSP” → “SDSP Start” → “SDSP OK” → “ARP Register” → “ARP Reg Start” → “ARP Reg OK” → “ARP Data” → “ARP DBus Start” → “ARP DBus OK” → “ARP Address” → “ARP ABus Start” → “ARP ABus OK” → “ARP DRAM” → “ARP DRAM Start” → “Wait ...” → “ARP DRAM OK” → “DSD Chp Bus” → “DSD Bus Start” → “DSD Bus OK” → “DSD Chp DRAM” → “DSD DRAM Start” → “Wait ...” → “DSD DRAM OK” → “SDBus Check” → “SDBus Start” → “Wait ...” → “SDBus OK” → “All Success” → “0. All (SELF)”

In case of an error in the Self Diag mode, the diagnosis restarting method can be selected in three ways, “QUIT”, “REPEAT” and “CONTINUE”, which function as follows:

QUIT : Quit diagnosis and return to the menu.

REPEAT : Restart diagnosis from the address where an error occurred.

CONTINUE : Restart diagnosis from the address next to the one where an error occurred.

- The error codes are listed in Self diagnosis error code list. (see page 8)

(2) 1. SRAM

From the “SELF DIAG Menu” display, rotate  controller clockwise to select “1. SRAM” and press  controller.

Then, “ExSRAM Start” → “ExRAM OK” → “1. SRAM” will be displayed and the check will finish.

(3) 2. EEPROM

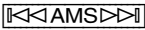
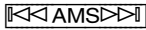
From the “SELF DIAG Menu” display, rotate  controller clockwise to select “2. EEPROM” and press  controller.

Then, the following will be displayed and the check will finish.

“EEPROM Start” → “Check 00” → “Check 10” → “Check 20” → “Check 30” → “Check 40” → “Check 50” → “Check 60” → “Check 70” → “Check 80” → “Check 90” → “Check A0” → “Check B0” → “Check C0” → “Check D0” → “Check E0” →

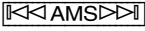
“Check F0” → “EEPROM OK” → “2. EEPROM”

(4) 3. HGA

From the “SELF DIAG Menu” display, rotate  controller clockwise to select “3. HGA” and press  controller.

Then, “HGA Start” → “HGA OK” → “3. HGA” will be displayed and the check will finish.

(5) 4. Servo DSP

From the “SELF DIAG Menu” display, rotate  controller clockwise to select “4. Servo DSP” and press  controller.

Then, “SDSP Start” → “SDSP OK” → “4. Servo DSP” will be displayed and the check will finish.

(6) 5. ARP Check

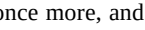
From the “SELF DIAG Menu” display, rotate  controller clockwise to select “5. ARP”.

• Checking items

DISPLAY	Contents of Check
0. All Check	Check of all items 1. – 4.
1. ARP Register	ARP register check
2. ARP Data	ARP data check
3. ARP Address	ARP address check
4. ARP DRAM	ARM DRAM check

① 1. ARP Register

From the “5. ARP” display, press  controller, and then “1. ARP Register” will be displayed.

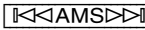
Press  controller once more, and then “ARP Reg Start” → “ARP Reg OK” will be displayed and the check will finish.

② 2. ARP Data

From the “1. ARP Register” display, rotate  controller clockwise to select “2. ARP Data”.

Press  controller, and then “ARP DBus Start” → “ARP DBus OK” → “2. ARP Data” will be displayed and the check will finish.

③ 3. ARP Address

From the “1. ARP Register” display, rotate  controller clockwise to select “3. ARP Address”.

Press  controller, and then “ARP ABus Start” → “ARP ABus OK” → “3. ARP Address” will be displayed and the check will finish.

④ 4. ARP DRAM

From the “1. ARP Register” display, rotate  controller clockwise to select “4. ARP DRAM”.

Press  controller, and then “ARP DRAM Start” → “Wait ...” → “ARP DRAM OK” → “4. ARP DRAM” will be displayed and the check will finish.

⑤ 0. All Check

From the “1. ARP Register” display, rotate  controller counterclockwise to select “0. All Check”.

Press  controller, and then the following will be displayed and the check will finish.

“ARP Register” → “ARP Reg Start” → “ARP Reg OK” → “ARP Data” → “ARP DBus Start” → “ARP DBus OK” → “ARP Address” → “ARP ABus Start” → “ARP ABus OK” → “ARP DRAM” → “ARP DRAM Start” → “Wait ...” → “ARP DRAM OK” → “Diag Success” → “0. All Check”

(7) 6. SACD Chip

From the “SELF DIAG Menu” display, rotate  controller clockwise to select “6. SACD Chip”.

• Checking items

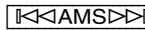
DISPLAY	Contents of Check
0. All Check	Check of all items 1. and 2.
1. DSD Chp Bus	Check presence of error in SACD DSD Chp Bus
2. DSD Chp DRAM	Check presence of error in SACD DSD Chp DRAM

① 1. DSD Chp Bus

From the “6. SACD Chip” display, press  controller, and then “1. DSD Chp Bus” will be displayed.

Press  controller once more, and then “DSD Bus Start” → “DSD Bus OK” → “1. DSD Chp Bus” will be displayed and the check will finish.

② 2. DSD Chp DRAM

From the “1. DSD Chp Bus” display, rotate  controller clockwise to select “2. DSD Chp DRAM”.

Press  controller, and then “DSD DRAM Start” → “Wait ...” → “DSD DRAM OK” → “DSD Chp DRAM” will be displayed and the check will finish.

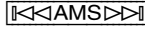
③ 0. All Check

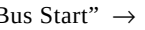
From the “1. DSD Chp Bus” display, rotate  controller counterclockwise to select “0. All Check”.

Press  controller, and then the following will be displayed and the check will finish.

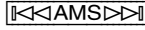
“DSD Chp Bus” → “DSD Bus Start” → “DSD Bus OK” → “DSD Chp DRAM” → “DSD DRAM Start” → “Wait ...” → “DSD DRAM OK” → “Diag Success” → “0. All Check”

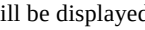
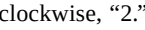
(8) 7. SDBus

From the “SELF DIAG Menu” display, rotate  controller clockwise to select “7. SDBus”.

Press  controller, and then “SDBus Start” → “Wait ...” → “SDBus OK” → “7. SDBus” will be displayed and the check will finish.

(9) 8. Diag Hist

From the “SELF DIAG Menu” display, rotate  controller clockwise to select “8. Diag Hist”.

Press  controller, and then “1.” will be displayed, and as the  controller is rotated clockwise, “2.” – “10.” will be displayed.

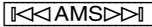
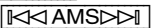
1. Auto Adjust Menu

From the “Test Mode Menu”, rotate  controller clockwise to select “1. Auto Adjust”.

Press  controller, and then “Auto Adj Menu” will be displayed, where you can select the following menu by rotating the  controller.

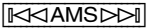
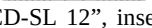
DISPLAY	Contents of Adjustment
0. All (Adjust)	Adjustment of all items 1. – 3.
1. SACD-SL	SACD-SL adjustment
2. CD	CD adjustment
3. SACD-DL	SACD-DL adjustment
4. HYBRID	HYBRID adjustment
5. All-Adj LFO	Adjustment of all items 1. – 3. with LFO value
6. Memory Check	Memory check

(1) 0. All (Adjust)

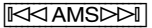
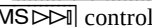
From the “Auto Adj Menu”, rotate  controller clockwise to select “0. All (Adjust)”. Press  controller, and then the servo setting data in the EEPROM will be cleared and initialized. After that, set the disc following the message and press  controller, so that the adjustments 1. – 3. are executed in order.

- ① In setting a disc, the disc type and size necessary for adjustment are displayed such as “Set SACD-SL 12”, and accordingly set the specified disc.
- ② Each time the adjustment for one disc finished, the disc is ejected. Replace it with the disc specified by the message.
- ③ In performing auto adjustment that requires the Loop Filter Offset value to be adjusted, from the “Auto Adj Menu”, rotate  controller clockwise to select “5. All-Adj LFO”. Set default value to the servo setting in the EEPROM, and then perform the Loop Filter Offset adjustment. For details of the adjustment, see (6) 5. All-Adj LFO.

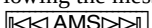
(2) 1. SACD-SL (Single Layer Disc) Adjustment

From the “Auto Adj Menu”, rotate  controller to select “1. SACD-SL”, and press  controller. Following the message “Set SACD-SL 12”, insert the disc and press  controller. Then, the adjustment will be executed in the adjustment values will be written to the EEPROM. Upon completion, “Remove Disc” message is displayed and the CD is ejected.

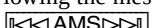
(3) 2. CD (CD Disc) Adjustment

From the “Auto Adj Menu”, rotate  controller to select “2. CD”, and press  controller. Following the message “Set CD 12”, insert the disc and press  controller. Then, the adjustment will be executed in the adjustment values will be written to the EEPROM. Upon completion, “Remove Disc” message is displayed and the CD is ejected.

(4) 3. SACD-DL (Dual Layer Disc) Adjustment

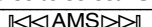
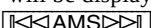
From the “Auto Adj Menu”, rotate  controller to select “3. SACD-DL”, and press  controller. Following the message “Set SACD-DL 12”, insert the disc and press  controller. Then, the adjustment will be executed in the following steps and the adjustment values will be written to the EEPROM. Upon completion, “Remove Disc” message is displayed and the CD is ejected.

(5) 4. HYBRID (Hybrid Disc CD Layer) Adjustment

From the “Auto Adj Menu”, rotate  controller to select “4. HYBRID”, and press  controller. Following the message “Set HYBRID 12”, insert the disc and press  controller. Then, the adjustment will be executed in the following steps and the adjustment values will be written to the EEPROM.

However, if a hybrid disc (12 cm) is not available, skip this adjustment. In this case, press the  button to quit the adjustment. Upon completion, “Remove Disc” message is displayed and the CD is ejected.

(6) 5. All-Adj LFO

From the “Auto Adj Menu”, rotate  controller clockwise to select “5. All-Adj LFO”. Press  controller, and then “Press Enter” will be displayed, and press it once more, and then “EepDfltSet” → “L.F. OFFSET=09” will be displayed. From the “L.F. OFFSET=09” display, rotate  controller, and then the L.F.OFFSET value can be increased or decreased as shown below.

“L.F. OFFSET = 09”

└ Offset value

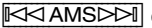
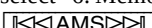
00 ← 01 ← 02 ← 03 ← 04 ← 05 ← 06 ←
07 ← 08 ← 09 → 0A → 0B → 0C → 0D →
0E → 0F → 10 → 11 → 12 → 13 → 14 →
15 → 16 → 17 → 18 → 19 → 1A → 1B →
1C → 1D → F8 → F9 → FA → FB → FC
→ FD → FE → FF)

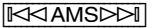
Select L.F. OFFSET value and press  controller, and then the CD, SACD-SL and SACD-DL will be adjusted with the L.F. OFFSET value specified here.

The subsequent operation is similar to that in (1) 0. All (Adjust).

(7) 6. Memory Check

The Memory Check displays the contents of servo setting stored in the EEPROM.

From the “Auto Adj Menu”, rotate  controller clockwise to select “6. Memory Check”. “EEPROM Data” will be displayed if  controller is pressed, or “CD” → “HYBR” → “SL” → “DL-L0” → “DL-L1” will be displayed if  controller is rotated clockwise.

At each mode display, press  controller and rotate  controller, and then the following will be displayed. (oo: HEX)

① Contents of CD servo setting

CD FG = oo TG = oo
CD F0 = oo T0 = oo
CD L0 = oo EB = oo
CD JT = oo MT = oo

② Contents of HYBR servo setting

H1 FG = oo TG = oo
H1 F0 = oo T0 = oo
H1 L0 = oo EB = oo
H1 JT = oo

③ Contents of SL servo setting

SL FG = oo TG = oo
SL F0 = oo T0 = oo
SL L0 = oo EB = oo
SL JT = oo MT = oo

④ Contents of DL-L0 servo setting

D0 FG = oo TG = oo
D0 F0 = oo T0 = oo
D0 L0 = oo EB = oo
D0 JT = oo MT = oo

⑤ Contents of DL-L1 servo setting

D1 FG = oo TG = oo
D1 F0 = oo T0 = oo
D1 L0 = oo EB = oo
D1 JT = oo

• How to See Error Code

If a fatal error occurred during adjustment and the adjustment could not continue, the adjustment is interrupted and the error is displayed.

[Example]

Error	15	11	35
			└ DSP error code
		Mechanism error	
	Service command		

This case shows “Focus ON command, DSP error, Sequence interrupted during Focus ON operation”.

DSP error code list (see page 8)

At the end of adjustment, whether the jitter is proper, and whether the adjustment value is within allowable range are judged and displayed as a whole. If all parameters are within allowable range, “Param Chk OK” will be displayed. If parameters out of the range are detected, an error message such as “3 Errs occur” will be displayed (this case shows three errors occurred). Press controller once to switch the display to the error list.

1. Error No.

SL Disc type

TG Parameter type

High

Err: SL TG Prm

M:7C E:3F U:27
 | | |
 | | | Limit value (U: Upper limit, L:
 | | | Lower limit)
 | | |
 | | | Value stored in EEPROM

“TG Too High”

To return to the previous step, or to exit from the error display, press the button.

From the “Test Mode Menu”, rotate controller clockwise to select “2. Manual Opr”. Press controller, and then “TiltSledReset” → “Manual Op” will be displayed, where you can select the following menu by rotating the controller clockwise.

DISPLAY	Contents of Menu
1. Disc Type	Disc type check
2. Srv Control	Servo control
3. T/L Jump	Tracking jump
4. Manual Adj	Manual adjustment
5. Auto Adj	Auto adjustment
6. Mem Check	Servo memory check
0. Disc Chk Mem	Disc check

From the “Manual Opr” menu, rotate the controller clockwise to select “1. Disc Type”. Press controller, and then “Disc Type” will be displayed, where you can select the following menu by rotating the controller and also can check each menu item by pressing the controller.

DISPLAY	Contents of Menu
1. Type Auto	Disc type is checked and the mode for that disc is set.
2. SACD SL 12cm	Disc type is set.
3. SACD DL 12cm	
4. CD 12cm	
5. HYBR-L1 12cm	
6. HYBR-L0 12cm	
7. SACD SL 8cm	
8. CD 8cm	
9. HYBR-L1 8cm	
0. RST Sld/Tlt	Tilt/Sled are reset.

Press **◀◀AMS▶▶** controller, and then “Srv Con” → “NO DISC” → “Srv Con 0000000” will be displayed, where you can select the following menu by rotating the **◀◀AMS▶▶** controller clockwise.

DISPLAY	Contents of Menu
1. LD	(1: ON, 0: OFF)
2. SD	
3. Focus	
4. TRK	
5. SLED	
6. CLVA	
7. F-Sch	Focus search
8. R S/T	Tilt/Sled are reset.

FF/FR move up and down the Tilt respectively, while Prev/Next Index move the Sled inward and outward respectively. The operation stops when the  button is pressed. Until then, the commands are issued successively, which could cause a trouble. Therefore, normally do not use this menu.

“1. LD” 1 0 0 0 0 0 0

Execution command LD ON Spindle ON Focus ON Tracking ON Sled ON CLVA ON Focus Search ON

The above case is that only the LD is turned on. Rotating  controller clockwise, turn on the servo in order of 1. – 6. to check the servo.

Also, with the servo of 1. – 6. turned on, press the **CHECK** button on the remote commander, so that you can check the disc type, jitter, etc. To return to original display, press the **CHECK** button again.

[Example]

SL 18 2A 020520
 Disc type Jitter value CLV status Sector address

CAUTION: In 7. F-Sch menu, the servo is not applied, thus causing optical system to be damaged if used together with other menu. Never use it.

(3) 3. T/L Jump

This adjustment is not normally used.

(4) 4. Manual Adj

This adjustment is not normally used.

(5) 5. Auto Adj

This adjustment is not normally used.

(6) 6. Mem Check

From the “Manual Opr” menu, rotate **◀◀AMS▶▶** controller clockwise to select “6. Mem Check”. Press **◀◀AMS▶▶** controller, and then “EEPROM Data” will be displayed, where you can select the following menu by rotating the **◀◀AMS▶▶** controller clockwise.

DISPLAY	Contents of Menu
CD	Servo setting check
HYBR	
SL	
DL-L0	
DL-L1	

- ① Select each menu and press **◀◀AMS▶▶** controller, and then the contents of servo setting stored in the EEPROM will be displayed.
- ② The contents of servo setting are same as those in (7) 6. Memory Check of Auto Adjust menu. (See page 4)
- ③ In this menu, default value can be written to the EEPROM. Press the **CLEAR** button on the Remote commander, “Deflt Set? Y/N” message will be displayed, and then press **◀◀AMS▶▶** controller. When “EepDfltSet” message is displayed, default value can be written to the EEPROM. To cancel default value setting, press the **■** button.

CAUTION: If you do “EepDfltSet”, after “EepDfltSet”, “Auto Adjustment” is needed. (see page 3)

(7) 7. Disc Chk Mem

From the “Manual Opr” menu, rotate **◀◀AMS▶▶** controller clockwise to select “0. Disc Chk Mem”. Press **◀◀AMS▶▶** controller, and then “Disc Check” will be displayed, where you can select the following menu by rotating the **◀◀AMS▶▶** controller clockwise.

DISPLAY	Contents of Menu
1. SL Disc Chk	Disc Type Check
2. CD Disc Chk	
3. DL Disc Chk	
0. Rst Sld/Tlt	Tilt and Sled are reset.

- Select the menu 1. – 3. and press the **◀◀AMS▶▶** control-

ler, and “New 3D” will be displayed, and then each display corresponding to the selected menu 1. – 3. will return.

3. Mecha Aging Menu

This is the mechanism aging mode.

From the “Test Mode Menu”, rotate **◀◀AMS▶▶** controller clockwise to select “3. Mecha Aging”. Press **◀◀AMS▶▶** controller, and “Mecha Aging” → “Abort Stop Key” → “Press Open Key” will be displayed. Press **⏏** button → **▶** button in this order, and the tray will be opened and closed repeatedly, and its count will be displayed. Up to 2,147,483,647 times can be counted. In such a case, the disc type is also checked.

[Example]

C: 2526

Number of counts

To quit this operation, press **■** and **■** buttons. (Simultaneously, the count is cleared.)

4. Emg History Menu

From the “Test Mode Menu”, rotate **◀◀AMS▶▶** controller clockwise to select “4. Emg History”. Press **◀◀AMS▶▶** controller, and “EMG History” message will be displayed. Rotating the **◀◀AMS▶▶** controller clockwise switches to the following display where the servo emergency history (1. – 10.) and the laser lighting hours are displayed.

1. 1F 06080000
 2. 2F 06080000
 3. 00 00000000
 4. 00 00000000
 5. 00 00000000
 6. 00 00000000
 7. 00 00000000
 8. 00 00000000
 9. 00 00000000
 10. 00 00000000

LASR 0h

CD 0h

SACD 0h

Clear History?

① How to see code

[Example]

11 06 04 C701
 History buffer 2byte DSP error code (see page 8)
 History disc type (see page 8)
 Mechanism mode (see page 8)
 Mechanism error code (see page 7)

This case shows “DSP error, Spin up mode, SL 12cm, CLV unlock at Sled ON”.

Also, at this time, pressing **◀◀AMS▶▶** controller causes all emergency information (16 bytes) to be displayed every 4 bytes for 4 items.

[Example]

1-1 00000000
 Emergency information 1

Item No.: Variable each time the **◀◀AMS▶▶** controller is pressed

② Laser lighting hours

[Example]

LASR 14h
 CD 6h
 SACD 8h

LASR displayed value is the total of CD and SACD laser lighting hours. (The time less than minutes is omitted.)

③ History clear

- How to clear all history data

For the items with “Clear History?” message, press **◀◀AMS▶▶** controller, and all emergency history data and all laser lighting hours are cleared to 0.

- How to clear individual data

① Emergency history clear

Press **DISPLAY MODE**, **CLEAR** buttons on the remote commander in this order.

② Laser lighting hour clear

Press **SACD/CD**, **CLEAR** buttons on the remote commander in this order.

③ Setup clear

Press **REPEAT**, **CLEAR** buttons on the remote commander in this order.

Five backup data of **PLAY MODE**, **CLEAR**, **SACD/CD**, **TIME/TEXT**, **DIGITAL FILTER** are cleared to the initial data.

5. Ver Info Menu

From the “Test Mode Menu”, rotate **◀◀AMS▶▶** controller clockwise to select “5. Ver Info”. Press **◀◀AMS▶▶** controller, and “Version Info” message will be displayed. Rotating the **◀◀AMS▶▶** controller clockwise switches to the following display where the ROM version, date of creation, servo DSP version, and checksum are displayed.

[Example]

V1.00 00/02/14
SrvDSP 1.000
RomCsum 711C

6. RF Jit Disp

From the “Test Mode Menu”, rotate **◀◀AMS▶▶** controller clockwise to select “6. RF Jit Disp”. Press **◀◀AMS▶▶** controller, and then “Set Disc” message will be displayed. Set a disc and press **◀◀AMS▶▶** controller, and “Sinup...” will be displayed, then the jitter will be measured and displayed. To exit from this mode, press the **||** button.

<Jitter measurement and display example>

CD 22 2A 000000
| | |
| | | Sector address
| | CLV status
| Jitter value
Disc type (auto check)

SL : Single layer disc

HC : Hybrid layer disc, CD layer

HD : Hybrid layer disc, SACD layer

DL : Dual layer disc

CD : CD disc

- ① The disc type is checked automatically.

- ② For a hybrid disc, rotating the **◀◀AMS▶▶** controller can switch the layer during jitter adjustment. Also, rotating the **◀◀AMS▶▶** controller can jump to inner track, middle track, or outer track. However, the address is fixed. Music cannot be searched. For a dual layer disc, a jump between layers is possible.

1. Play HD-HL0
2. Play CD-HL1
3. Jp Md1 Track
4. Jp Inn Track
5. Jp Out Track
6. Jp DL0 -> DL1
7. Jp DL1 -> DL0

- ③ Press **⏏** button to change the disc.

7. PDM Mode Menu

This mode is not normally used.

8. CDM Adj Menu

This mode is not normally used.

9. Set Up Init Menu

From the “Test Mode Menu”, rotate **◀◀AMS▶▶** controller clockwise to select “7. Set Up Init”. Press **◀◀AMS▶▶** controller, and “Initialized” will be displayed, then “Reset? Y/N” will be displayed. Press again **◀◀AMS▶▶** controller, and “Restart ...” will be displayed, and then the player will be reset and restarted. (At the restart, the set exits from the Test mode.)

10. Sld Ship Pos Menu

Moving sled the factory set up position.

Mechanism error code

Category	Emergency Name	Emergency Code
Electrical	SSI ERR	10
	DSP ERR	11
	EEP ERR	12
	EEP HOURS METER WRITE ERR	13
	DSP BUSY TIME OUT	14
	EEP CHECK SUM NG	15
	DSP BUSY TIME OUT ESCAPE	16
Mechanism	TILT SLED RESET NG	20
	TILT MOVE NG	21
	TILT REQ POSI NG	22
	SLED MOVE NG	23
	SLED REQ POSI NG	24
Adjustment	ADJ TRK BAL NG	30
	ADJ TRK GAIN	31
	ADJ FCS BAL NG	32
	ADJ FCS BIAS NG	33
	ADJ FCS GAIN	34
	ADJ TILT NG	35
	ADJ EQ BOOST NG	36
	ADJ GD NG	37
	ADJ LAST JITTER NG	38
	ADJ GAIN RANGE OVER	3F
Focus	FOCUS NG	F1
	FOCUS JUMP COUNT OVER	41
Spindle	CLV LOCK NG	1F
	SPDL BRAKE COUNT OVER	51
Sheek	SACD REQ ADR NG	60
	CD REQ ADR NG	61
	CD REQ INDEX NG	62
	SACD SEEK COUNT OVER	63
	CD SA SEARCH COUNT OVER	64
	CD INDEX SEARCH COUNT OVER	65
Date	SACD INFO NG	70
	CD INFO TIME OUT	71
Other	RECOVERY DISC CHECK NG	DF
	RECOVERY COUNT OVER	81
	DISC CHECK ERR	DF
	DISC CHECK TIME OUT	83
	INVALID CMD CODE	84
	INVALID CMD	85
	DUMMY JOB	86
	NEXT MODE NONE	87

History disc type

Display	Contents
0x00	TBD
0x01	CheckErr
0x02	NoDisc
0x03	SacdSl08
0x04	SacdSl12
0x05	SacdDl08
0x06	SacdDl12
0x07	Cd08
0x08	Cd12
0x09	Hl08
0x0a	Hl12

0x: Hex.

Mechanism mode

Display	Contents
0x00	Reset
0x01	DriveInit
0x02	PonReady
0x03	MechInit
0x04	Stop
0x05	DiscCheck
0x06	SpinUp
0x07	SpinDown
0x08	Seek
0x09	Trace
0x0a	Pause
0x0b	Recovery
0x0c	RecoDc
0x0d	SrvcStop
0x0e	Srvc

0x: Hex.

Self diagnosis error code

Display	Contents
00	Normal end
01	SRAM Read/Write NG
02	HGA NG
03	EEPROM NG
04	ARP Resister NG
05	ARP DATA BUS NG
06	ARP ADDRESS BUS NG
07	ARP RAM Read/Write NG
08	Servo DSP Resister NG
09	SACD CHIP DRAM NG
10	SACD CHIP DRAM TIME OUT
11	SACD CHIP BUS NG
12	SDBUS NG
13	SDBUS TIME OUT

Service command

Display	Contents	code
Tray Open	Tray open	01
Tray Close	Tray close	02
Set Disc Type	Set Disc Type	03
Sled Go Home	Sled move Home position	04
Tilt Go Home	Tilt move Home Position	05
Sled Tilt Reset	Sled/Tilt Reset	06
Tray Down	Tray chuck Down	07
All Servo Stop	All Servo stop	10
Ld On	Laser diode ON	11
Ld Off	Laser diode OFF	12
Focus Search	Focus Search	13
Focus Off	Focus Servo OFF	14
Focus Search On	Focus Servo ON	15
Tracking On	Tracking Servo ON	17
Tracking Off	Tracking Servo OFF	18
Sled On	Sled Servo ON	19
Sled Off	Sled Servo OFF	1A
Sled Move Fwd	Sled Move Foward	1B
Sled Move Rev	Sled Move Reverse	1C
Sled Direct Move	Sled Direct Move	1D
Spdl Start	disc size cheking and spendle start	20
Spdl Stop	Spingdle stop	21
Cav On	Spindle with normal speed ON	22
Clva On	CLVA Servo ON	26
Tilt Move Down	Tilt Move Down	2B
Tilt Move Up	Tilt Move Up	2C
Tilt Direct Move	Tilt Direct Move	2D
Lj (L0 -> L1)	LayerJump (Tracking/Sled Servo ON)	3A
Lj (L1 -> L0)		3B
Fj (L0 -> L1)	FocusJump (Tracking/Sled Servo OFF)	3C
Fj (L1 -> L0)		3D

DSP error code

Task code (Upper Column)

Code*	Contents
2	Traking balance adjustment
3	Focus Search
4	Focus jump
5	Traking ON
6	1, 2 Track jump
7	Middle Track jump
8	Large Track jump
9	Sled move
c	Sled ON
d	Sereal

*Code: Hex.

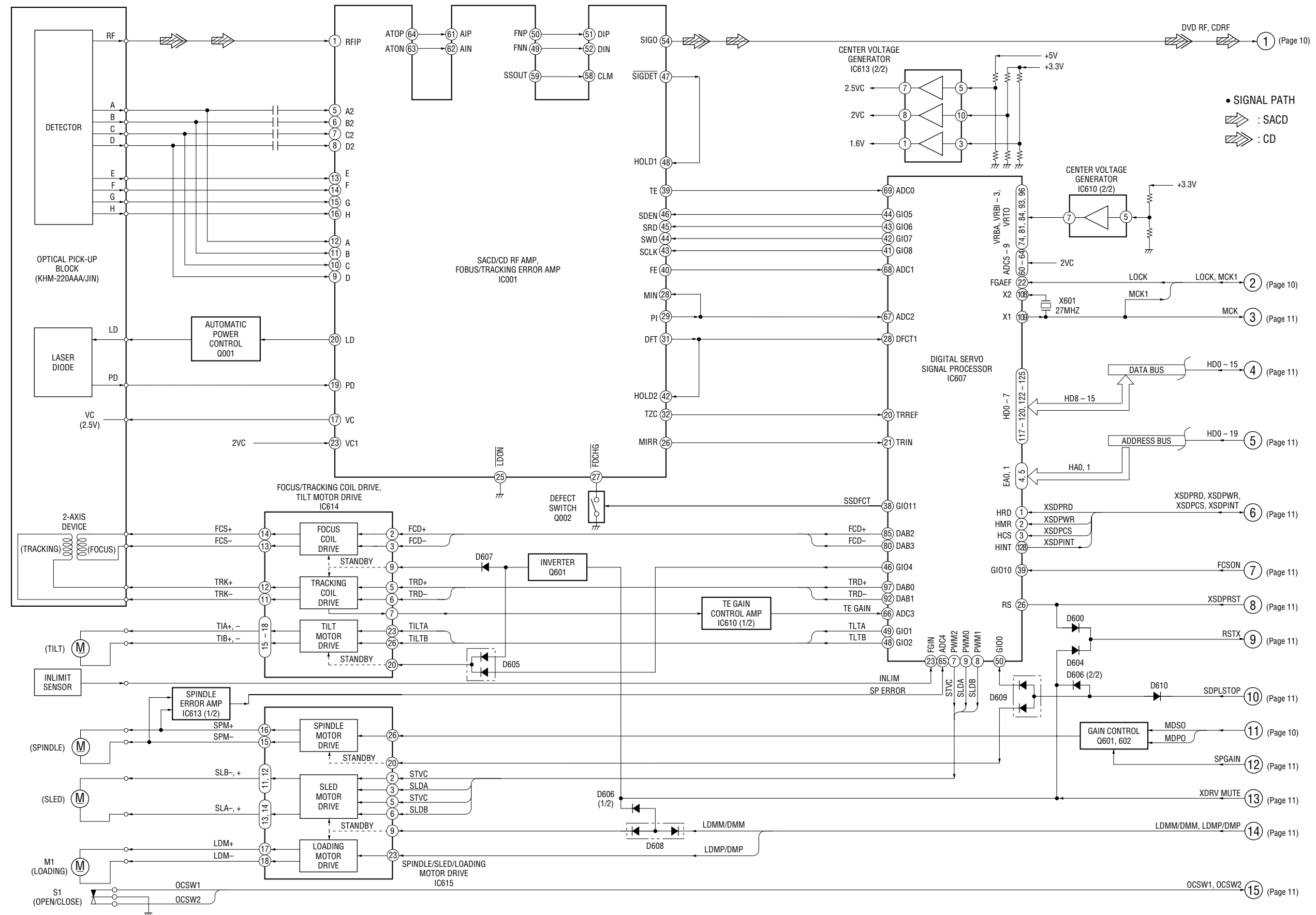
Error code (Lower column)

Code*	Contents
2	Sequence Command in Sequence
3	Invalid Parameter
4	Sequence Stop by "time out"
5	Sequence Stop except "time out"
6	Not FOK
7	Not LOCK
8	Servo ON in servo ON
9	Defect Continuation Detect
a	Focus OFF
b	Tracking OFF
c	ACK Error

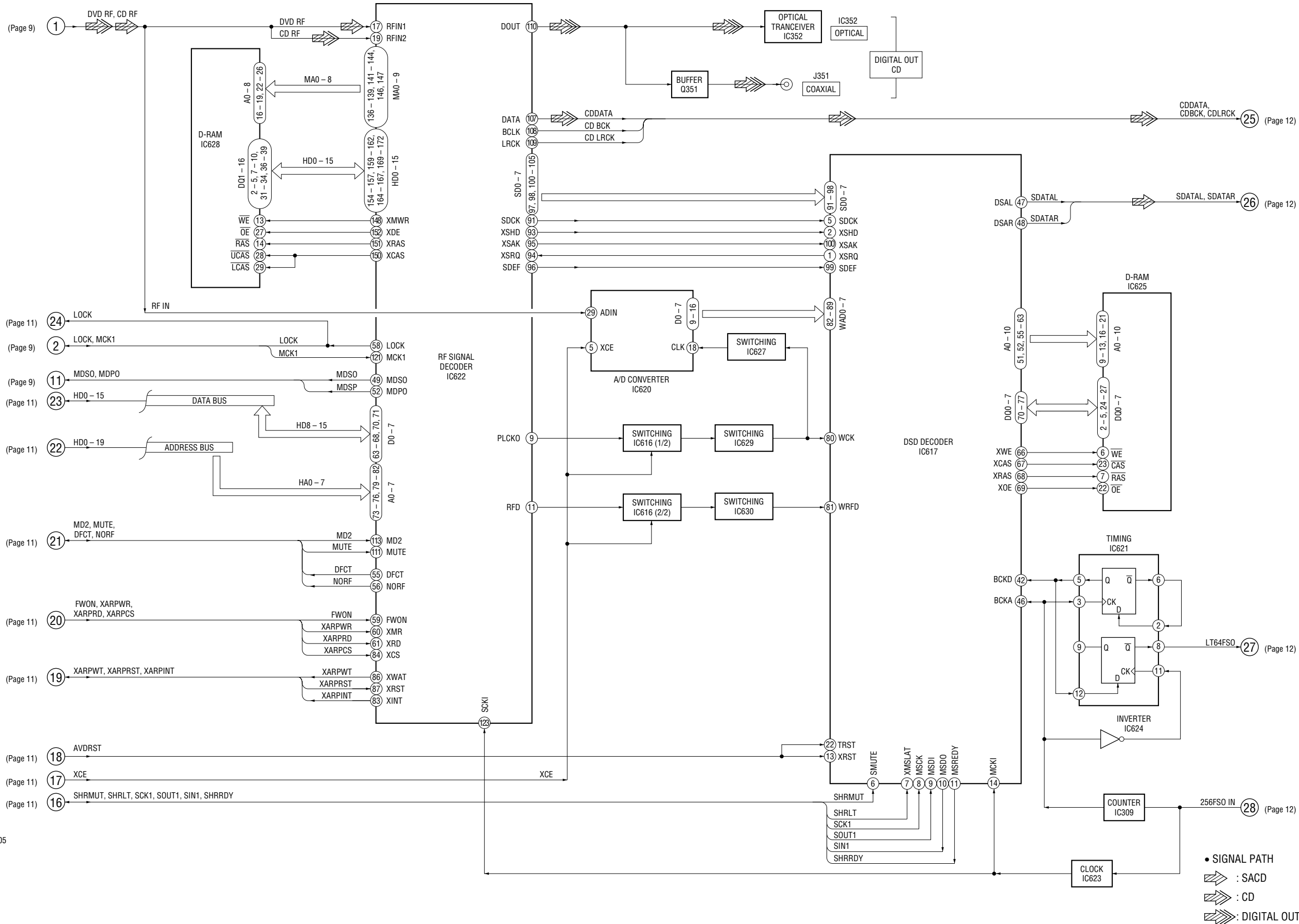
*Code: Hex.

2. DIAGRAMS

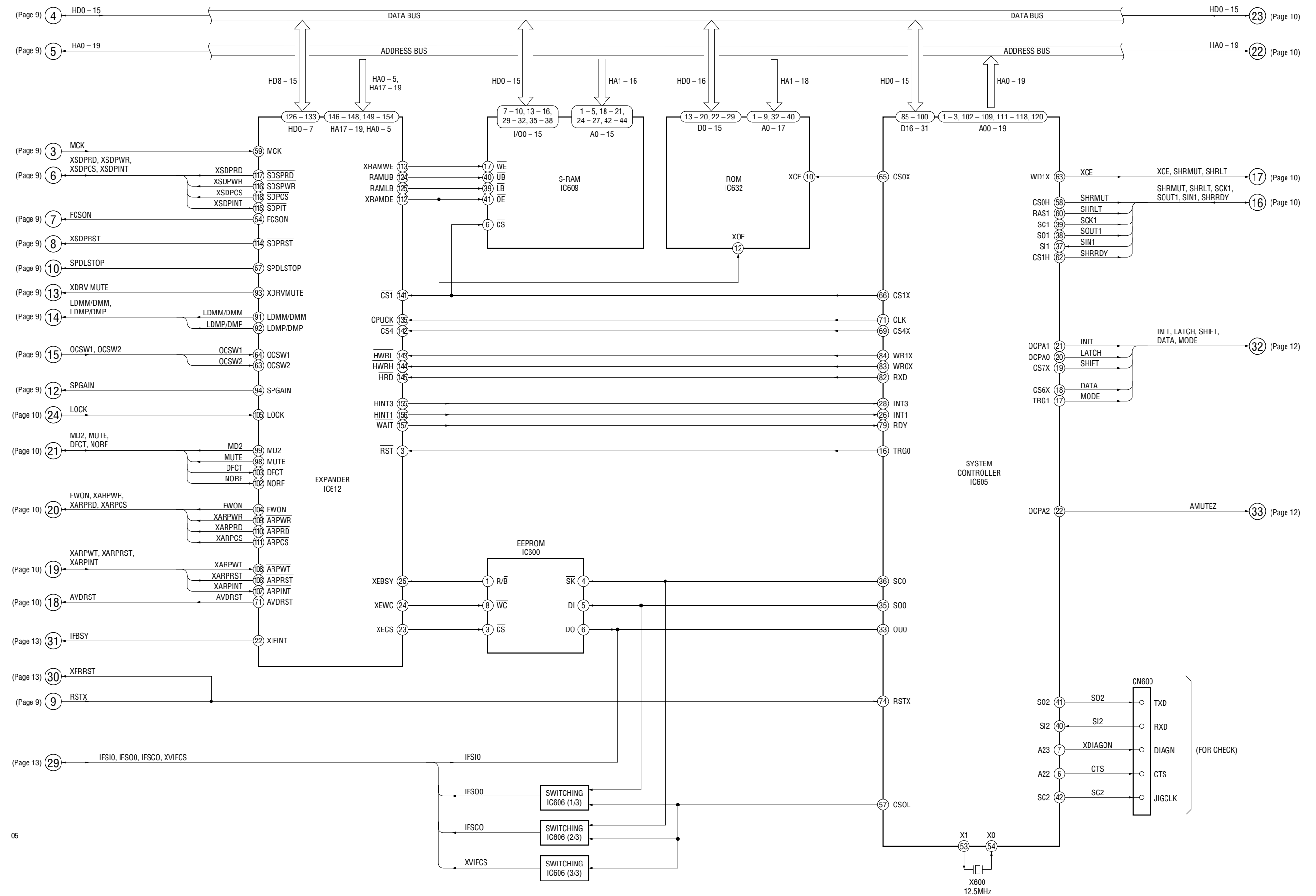
2-1. BLOCK DIAGRAM – RF/SERVO Section –



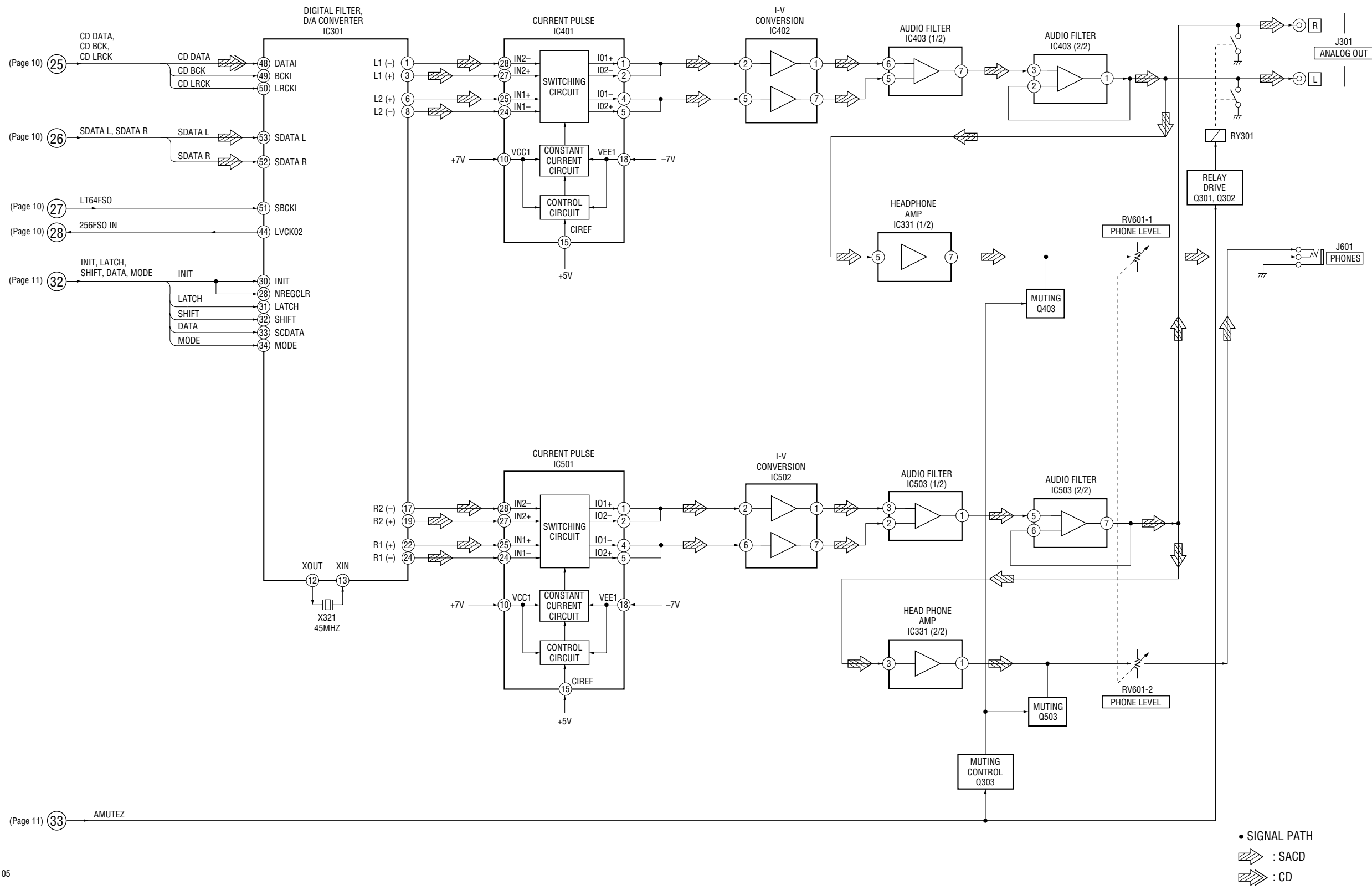
2-2. BLOCK DIAGRAM – MAIN Section (1/2) –



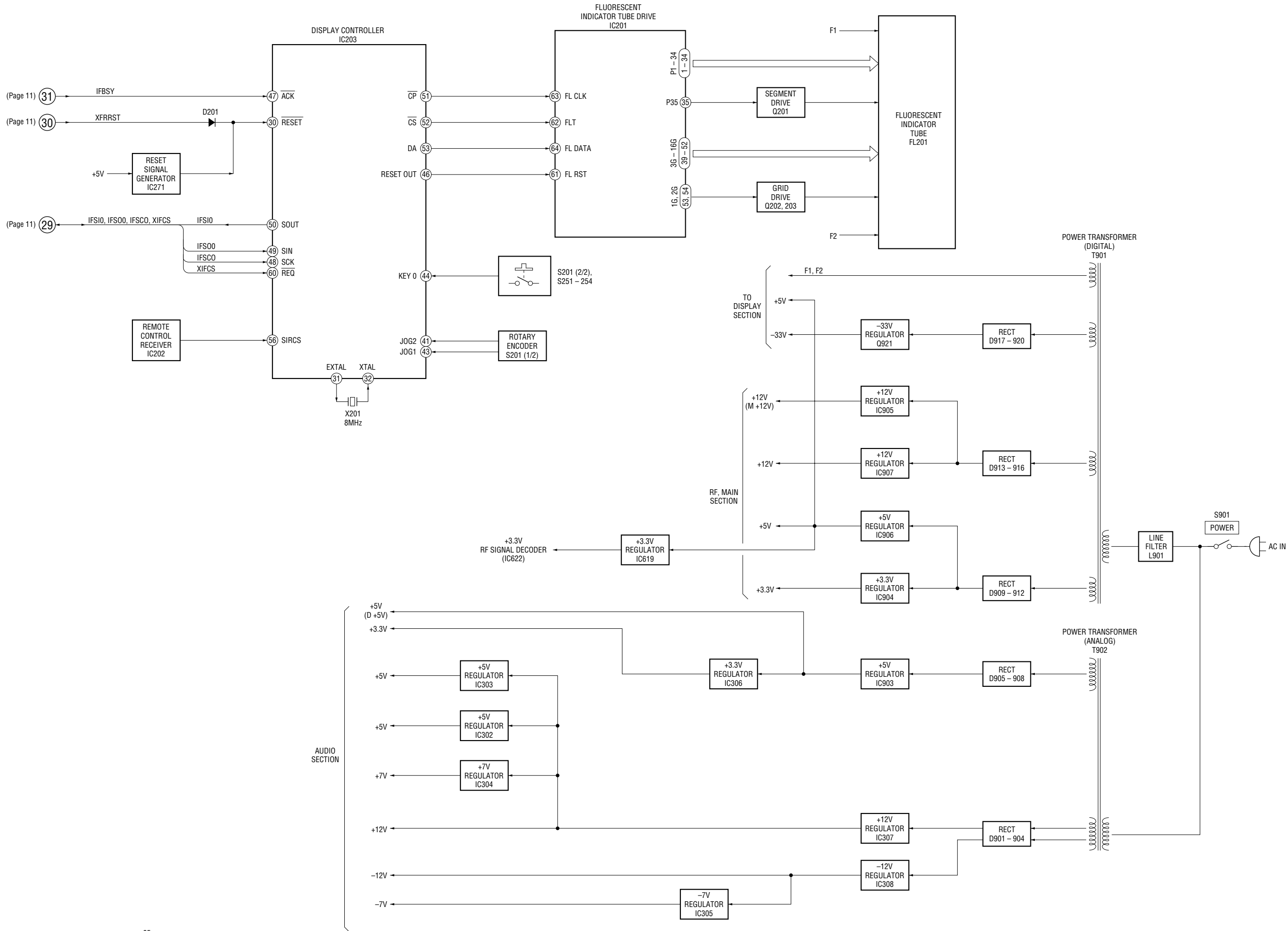
2-3. BLOCK DIAGRAM – MAIN Section (2/2) –



2-4. BLOCK DIAGRAM – AUDIO Section –



2-5. BLOCK DIAGRAM – DISPLAY/POWER SUPPLY Section –



2-6. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC605 MB91107PFV-G-BND (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1, 2	A17/P61, A18/P62	O	Address signal output to the expander (IC612) and ROM (IC632)
3	A19/P63	O	Address signal output to the expander (IC612)
4, 5	A20/P64, A21/P65	O	Address signal output terminal Not used (open)
6, 7	A22/P66, A23/P67	O	Test signal output terminal for check (fixed at “H” in this set)
8	A24/P70	O	Address signal output terminal (fixed at “H” in this set)
9	AVCC	—	Power supply terminal (+3.3V) (for A/D converter)
10	AVRH	—	Reference voltage input (high) terminal (for A/D converter)
11	AVSS/AVRL	—	Ground terminal (for A/D converter) and Reference voltage input (low) terminal
12 to 15	AN0 to AN3	I	Analog input terminal (for A/D converter)
16	TRG0/PH0	O	Reset signal output to the expander (IC612) “L”: reset
17	TRG1/PH1	O	SACD/CD mode signal output to the digital filter (IC301)
18	TRG2/PH2/CS6X	O	Serial data output to the digital filter (IC301)
19	TRG3/PH3/CS7X	O	Shift signal output to the digital filter (IC301)
20	OCPA0/PH4	O	Latch signal output to the digital filter (IC301)
21	OCPA1/PH5	O	Initial signal output to the digital filter (IC301)
22	OCPA2/PH6	O	Audio muting signal output terminal “L”: muting
23	OCPA3/PH7	O	Filter control signal output terminal
24	VCC	—	Power supply terminal (+3.3V) (digital system)
25	INT0/PG0	I	External interrupt request signal input terminal Not used (fixed at “H”)
26	INT1/PG1	I	Interrupt request 1 signal input from the expander (IC612)
27	INT2/PG2	I	External interrupt request signal input terminal Not used (fixed at “H”)
28	INT3/PG3	I	Interrupt request 3 signal input from the expander (IC612)
29 to 32	INT4/PG4 to INT7/PG7	I	External interrupt request signal input terminal Not used (fixed at “H”)
33	SI0/RF0	I	Serial data input from the display controller (IC203) and EEPROM (IC600)
34	VSS	—	Ground terminal (digital system)
35	SO0/PF1	O	Serial data output to the display controller (IC203) and EEPROM (IC600)
36	SC0/PF2	O	Clock signal output to the display controller (IC203) and EEPROM (IC600)
37	SI1/PF3	I	Serial data input from the DSD decoder (IC617)
38	SO1/PF4	O	Serial data output to the DSD decoder (IC617)
39	SC1/PF5	O	Clock signal output to the DSD decoder (IC617)
40	SI2/PF6	I	Serial data input terminal for check
41	SO2/PF7	O	Serial data output terminal for check
42	SC2/PE0	O	Clock signal output terminal for check
43	DREQ0/PE1	I	External transfer request signal input terminal
44	DACK0/PE2	O	External transfer request acknowledge signal output terminal
45	EOP0/PE3	O	Not used (open)
46	DREQ1/PE4	I	External transfer request signal input terminal Not used (fixed at “H”)
47	DACK1/PE5	O	External transfer request acknowledge signal output terminal Not used (fixed at “H”)
48	EOP1/PE6	O	Not used (open)
49	DREQ2/PE7	I	External transfer request signal input terminal Not used (open)
50	DACK2/PI0	O	External transfer request acknowledge signal output terminal Not used (open)
51	EOP2/PI1/ATGX	O	Not used (open)

Pin No.	Pin Name	I/O	Description
52	VSS	—	Ground terminal (digital system)
53	X1	O	System clock output terminal (12.5MHz)
54	X0	I	System clock input terminal (12.5MHz)
55	VCC	—	Power supply terminal (+3.3V) (digital system)
56	RAS0/PB0	O	Control signal output terminal Not used (fixed at “H”)
57	CS0L/PB1	O	Interrupt request signal output to the display controller (IC203)
58	CS0H/PB2	O	Muting signal output to the DSD decoder (IC617) “L”: muting
59	DW0X/PB3	O	Not used (open)
60	RAS1/PB4	O	Latch signal output to the DSD decoder (IC617)
61	CS1L/PB5	O	Not used (open)
62	CS1H/PB6	I	Ready signal input from the DSD decoder (IC617) “L”: ready
63	DW1X/PB7	O	Write enable signal output terminal “L”: active
64	C	—	Bypass capacitor terminal for internal capacitor
65	CS0X	O	Chip select signal output to the ROM (IC632) “L”: active
66	CS1X/PA1	O	Chip select signal output to the expander (IC612) and S-RAM (IC632) “L”: active
67, 68	CS2X/PA2, CS3X/PA3	O	Chip select signal output terminal “L”: active (fixed at “H” in this set)
69	CS4X/PA4	O	Chip select signal output to the expander (IC612) “L”: active
70	CS5X/PA5	O	Chip select signal output terminal “L”: active (fixed at “H” in this set)
71	CLK/PA6	O	Clock signal output to the expander (IC612)
72	NMIX	I	Non maskable interrupt signal input terminal “L”: active (fixed at “H” in this set)
73	HSTX	I	Hardware standby signal input terminal “L”: active (fixed at “H” in this set)
74	RSTX	I	Reset signal input from the display controller (IC203)
75	VSS	—	Ground terminal (digital system)
76	MD0	I	Mode set signal input terminal (fixed at “H”)
77, 78	MD1, MD2	I	Mode set signal input terminal (fixed at “L”)
79	RDY/P80	I	Wait signal input from the expander (IC612)
80	BGRNTX/P81	O	External bus release acknowledge signal output terminal (fixed at “H” in this set)
81	BRQ/P82	I	External bus release request signal input terminal (fixed at “L” in this set)
82	RDX	O	Read strobe signal output to the expander (IC612)
83	WROX	O	Write strobe 0 signal output to the expander (IC612)
84	WR1X/P85	O	Write strobe 1 signal output to the expander (IC612)
85 to 92	D16/P20 to D23/P27	I/O	Two-way data bus with the S-RAM (IC609) and ROM (IC632)
93 to 100	D24 to D31	I/O	Two-way data bus with the servo digital signal processor (IC607), S-RAM (IC609), expander (IC612), RF signal decoder (IC622), and ROM (IC632)
101	VSS	—	Ground terminal (digital system)
102	A00	O	Address signal output to the servo digital signal processor (IC607), expander (IC612), and RF signal decoder (IC622)
103	A01	O	Address signal output to the servo digital signal processor (IC607), S-RAM (IC609), expander (IC612), RF signal decoder (IC622), and ROM (IC632)
104 to 107	A02 to A05	O	Address signal output to the S-RAM (IC609), expander (IC612), RF signal decoder (IC622), and ROM (IC632)
108, 109	A06, A07	O	Address signal output to the S-RAM (IC609), RF signal decoder (IC622), and ROM (IC632)
110	VCC	—	Power supply terminal (+3.3V) (digital system)
111 to 118	A08 to A15	O	Address signal output to the S-RAM (IC609) and ROM (IC632)
119	VSS	—	Ground terminal (digital system)
120	A16/P60	O	Address signal output to the S-RAM (IC609) and ROM (IC632)

• MAIN BOARD IC607 CXD8791AQ (DIGITAL SERVO SIGNAL PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	HRD/HRXD	I	Data read strobe signal input from the expander (IC612)
2	HWR/HFS	I	Data write strobe signal input from the expander (IC612)
3	HCS	I	Chip select signal input from the expander (IC612)
4, 5	HA1, HA0/HCK	I	Address signal input from the system controller (IC605)
6	VDD	—	Power supply terminal (+3.3V) (digital system)
7 to 9	PWM0 to PWM2	O	Sled motor control signal output to the sled motor drive (IC615)
10	VSS	—	Ground terminal (digital system)
11, 12	EMU1, EMU0	I/O	Emulator signal input/output terminal Not used (open)
13	TDO	O	Test data output terminal Not used (open)
14	TCK	I	Test clock input terminal Not used (open)
15	TDI	I	Test data input terminal Not used (open)
16	TMS	I	Test mode select signal input terminal Not used (open)
17	TRST	I	Test reset signal input terminal Not used (open)
18	VDD	—	Power supply terminal (+3.3V) (digital system)
19	VSS	—	Ground terminal (digital system)
20	TRREF	I	Tracking reference signal input from the SSI33P3722 (IC001)
21	TRIN	I	Mirror detect signal input from the SSI33P3722 (IC001)
22	FGREF	I	FG reference clock signal input from the RF signal decoder (IC622)
23	FGIN	I	FG signal input terminal
24	PGREF	I	PG reference signal input terminal Not used (open)
25	PGIN	I	PG signal input terminal Not used (open)
26	RS	I	Reset signal input from the expander (IC612)
27	LG	I	Not used (open)
28	DFCT1	I	Defect signal input terminal
29	HEAD	I	Head signal input terminal Not used (open)
30	CLKODIS	I	CLKOUT1 (pin ㉓) disable signal input terminal “H”: disable (fixed at “L” in this set)
31	CLKOUT1	O	Master clock output terminal Not used (open)
32	VDD	—	Power supply terminal (+3.3V) (digital system)
33	VSS	—	Ground terminal (digital system)
34 to 37	GIO15 to GIO12	—	Not used (open)
38	GIO11	O	Defect control signal output terminal
39	GIO10	O	Function control signal input from the expander (IC612)
40	GIO9	—	Not used (open)
41	GIO8	O	Clock signal output to the SSI33P3722 (IC001)
42	GIO7	O	Serial write data output to the SSI33P3722 (IC001)
43	GIO6/TMC2	I	Serial read data input from the SSI33P3722 (IC001)
44	GIO5/TMC1	O	Serial data enable output to the SSI33P3722 (IC001)
45	VDD	—	Power supply terminal (+3.3V) (digital system)
46	GIO4/TMC0	I	Standby signal input from the tilt motor drive (IC614)
47	GIO3/INT5	—	Not used (open)
48	GIO2/INT4	O	Tilt motor control signal output to the tilt motor drive (IC614)
49	GIO1/INT3	O	Tilt motor control signal output to the tilt motor drive (IC614)
50	GIO0/INT2	I	Interrupt signal input terminal
51	VSS	—	Ground terminal (digital system)
52	TESTC	I	Test signal input terminal (fixed at “L”)

Pin No.	Pin Name	I/O	Description
53 to 56	TEST3 to TEST0	I	Test signal input terminal (fixed at “L”)
57, 58	TESTSIA1, TESTSIA0	I	Test signal input terminal (fixed at “L”)
59	TESTSOA	O	Test signal output terminal (open)
60 to 64	ADC9 to ADC5	I	Reference voltage input terminal
65	ADC4	I	Spindle error signal input terminal
66	ADC3	I	TE gain control signal input terminal
67	ADC2	I	PI signal input from the SSI33P3722 (IC001)
68	ADC1	I	FE signal input from the SSI33P3722 (IC001)
69	ADC0	I	TE signal input from the SSI33P3722 (IC001)
70	VRTA	I	Reference voltage (top) input terminal (for A/D converter)
71	VCCA1	—	Power supply terminal (+3.3V) (analog system)
72	TESTA	O	Test signal output terminal (open)
73	GNDA1	—	Ground terminal (analog system)
74	VRBA	I	Reference voltage (bottom) input terminal (for A/D converter)
75	VSS3V1	—	Ground terminal (analog system)
76	VDD3V1	—	Power supply terminal (+3.3V) (analog system)
77	GNDA2	—	Ground terminal (analog system)
78	VCCA2	—	Power supply terminal (+3.3V) (analog system)
79	VRT3	I	Reference voltage (top) input terminal (for D/A converter)
80	DAB3	O	Focus coil control signal output to the focus coil drive (IC614)
81	VRB3	I	Reference voltage (bottom) input terminal (for D/A converter)
82	VSS3V2	—	Ground terminal (analog system)
83	VDD3V2	—	Power supply terminal (+3.3V) (analog system)
84	VRB2	I	Reference voltage (bottom) input terminal (for D/A converter)
85	DAB2	O	Focus coil control signal output to the focus coil drive (IC614)
86	VRT2	I	Reference voltage (top) input terminal (for D/A converter)
87	VCCA3	—	Power supply terminal (+3.3V) (analog system)
88	GNDA3	—	Ground terminal (analog system)
89	GNDA4	—	Ground terminal (analog system)
90	VCCA4	—	Power supply terminal (+3.3V) (analog system)
91	VRT1	I	Reference voltage (top) input terminal (for D/A converter)
92	DAB1	O	Tracking coil control signal output to the tracking coil drive (IC614)
93	VRB1	I	Reference voltage (bottom) input terminal (for D/A converter)
94	VSS3V3	—	Ground terminal (analog system)
95	VDD3V3	—	Power supply terminal (+3.3V) (analog system)
96	VRB0	I	Reference voltage (bottom) input terminal (for D/A converter)
97	DAB0	O	Tracking coil control signal output to the tracking coil drive (IC614)
98	VRT0	I	Reference voltage (top) input terminal (for D/A converter)
99	VCCA5	—	Power supply terminal (+3.3V) (analog system)
100	GNDA5	—	Ground terminal (analog system)
101, 102	TESTSIB1, TESTSIB0	I	Test signal input terminal (fixed at “L”)
103	TESTSOB	O	Test signal output terminal (open)
104	PLLMD	I	PLL mode select signal output terminal Not used (fixed at “H”)
105	TESTB	I	Test signal input terminal (fixed at “L”)

Pin No.	Pin Name	I/O	Description
106	VDD	—	Power supply terminal (+3.3V) (digital system)
107	VSS	—	Ground terminal (digital system)
108	X2/CLKIN	I	Clock input terminal (27MHz)
109	X1	O	Clock output terminal (27MHz)
110	VDD	—	Power supply terminal (+3.3V) (digital system)
111	VSS	—	Ground terminal (digital system)
112	VCCA6	—	Power supply terminal (+3.3V) (analog system)
113	LF	I/O	LF signal input/output terminal
114	GND A6	—	Ground terminal (analog system)
115	VDD	—	Power supply terminal (+3.3V) (digital system)
116	VSS	—	Ground terminal (digital system)
117	HD7/HIO	I/O	Two-way data bus with the system controller (IC605), S-RAM (IC609), expander (IC612) , RF signal decoder (IC622), and ROM (IC632)
118 to 120	HD6/HO6, HD4/HO4	I/O	Two-way data bus with the system controller (IC605), S-RAM (IC609), expander (IC612) , RF signal decoder (IC622), and ROM (IC632)
121	VDD	—	Power supply terminal (+3.3V) (digital system)
122 to 125	HD3/HO3, HD0/HO0	I/O	Two-way data bus with the system controller (IC605), S-RAM (IC609), expander (IC612) , RF signal decoder (IC622), and ROM (IC632)
126	VSS	—	Ground terminal (digital system)
127	SRPRN	I	Parallel/serial mode select signal input terminal “L”: parallel mode (fixed at “L” in this set)
128	HINT/HTXD	O	Interrupt signal output to the expander (IC612)

• MAIN BOARD IC612 CXD9515Q (EXPANDER)

Pin No.	Pin Name	I/O	Description
1	VDD	—	Power supply terminal (+3.3V)
2	NC	—	Not used (open)
3	$\overline{\text{RST}}$	I	Reset signal input from the system controller (IC605) “L”: reset
4	XFBSY	I	Busy signal input terminal “L”: busy
5	$\overline{\text{NFBSY}}$	I	Not used (fixed at “H”)
6	NFCLE	O	Not used (open)
7	NFALE	O	Not used (open)
8	$\overline{\text{NFCE}}$	O	Not used (open)
9	$\overline{\text{NFRE}}$	O	Not used (open)
10	$\overline{\text{NFW E}}$	O	Not used (open)
11	$\overline{\text{NFWP}}$	O	Not used (open)
12 to 19	NFD0 to NFD7	I/O	Not used (open)
20	VDD	—	Power supply terminal (+3.3V)
21	GND	—	Ground terminal
22	XIFBSY	I	Busy signal input from the display controller (IC203) “L”: busy
23	XECS	O	Chip select signal output to the EEPROM (IC600)
24	XEWC	O	Write control signal output to the EEPROM (IC600)
25	XEBSY	I	Busy signal input from the EEPROM (IC600) “L”: busy
26	$\overline{\text{DACRST}}$	O	Not used (open)
27	$\overline{57\text{RST}}$	O	Not used (open)
28	$\overline{01\text{CS}}$	O	Not used (open)
29, 30	$\overline{01\text{IT0}}, \overline{01\text{IT1}}$	I	Not used (open)
31	$\overline{01\text{RST}}$	O	Not used (open)
32	$\overline{\text{KRRST}}$	O	Not used (open)
33	XKRDY	I	Not used (fixed at “H”)
34	$\overline{\text{KARLT}}$	O	Not used (open)
35	$\overline{\text{CLAPBSY}}$	I	Not used (fixed at “H”)
36	CLAPSW1	O	Not used (open)
37	CLAPSW0	O	Not used (open)
38	OTASUKE	I	Not used (fixed at “H”)
39	NC	—	Not used (open)
40	VDD	—	Power supply terminal (+3.3V)
41, 42	GND	—	Ground terminal (digital system)
43	NC	—	Not used (open)
44	SMC	I	Not used (fixed at “L”)
45	SIN	I	Not used (fixed at “L”)
46	SOT	O	Not used (open)
47	SCK	I	Not used (fixed at “L”)
48	AMC	I	Not used (fixed at “L”)
49	MAMUTE	O	Not used (open)
50	MICMUTE	O	Not used (open)
51	EUROV/Y	O	Not used (open)
52	RGBSEL	O	Not used (open)
53	VS	O	Not used (open)
54	FCSON	I	Function control signal input from the servo digital signal processor (IC607)

Pin No.	Pin Name	I/O	Description
55, 56	EXPO0, EXPO1	O	Not used (open)
57	SPDLSTOP	O	Spindle motor control signal output terminal
58	GND	—	Ground terminal
59	MCK	I	Clock input terminal (27MHz)
60	GND	—	Ground terminal
61	DSLED	O	Not used (open)
62	XHDSPCS	O	Not used (open)
63	OSCW2	I	Open/close switch (S1) (close) input terminal
64	OSCW1	I	Open/close switch (S1) (open) input terminal
65 to 67	TSW3 to TSW1	I	Not used (open)
68	DSW1	I	Not used (fixed at “L”)
69, 70	TRNS, TRMP	O	Not used (fixed at “H”)
71	AVDRST	O	Reset signal output to the DSD decoder (IC617) “L”: reset
72	AVDWT	I	Not used (fixed at “H”)
73	XJGWT	I	Not used (fixed at “H”)
74	XJGCS	O	Not used (open)
75	AVDRQ1IN	I	Not used (fixed at “H”)
76	AVDRQ0IN	I	Not used (fixed at “H”)
77	AVDADO	O	Not used (open)
78	NC	—	Not used (open)
79, 80	GND	—	Ground terminal
81	VDD	—	Power supply terminal (+3.3V)
82	NC	—	Not used (open)
83	CKSW2	I	Not used (fixed at “H”)
84, 85	EXPI1, EXPI2	I	Not used (fixed at “L”)
86	UCSW	I	Not used (fixed at “L”)
87	DLSW	I	Not used (fixed at “L”)
88	CKSW1	I	Not used (fixed at “H”)
89, 90	CKMM, CKMP	O	Not used (open)
91, 92	LDMM, LDMP	O	Loading motor (M1) control signal output to the loading motor drive (IC615)
93	XDRVMUTE	O	Muting signal output terminal “L”: muting
94	SPGAIN	O	Spindle gain control signal output terminal
95	KARAOKEON	O	Not used (open)
96	XDACS2	O	Not used (open)
97	XDACS3	O	Not used (open)
98	MUTE	O	Muting signal output to the RF signal decoder (IC622)
99	MD2	O	Mode control signal output to the RF signal decoder (IC622)
100	VDD	—	Power supply terminal (+3.3V)
101	GND	—	Ground terminal
102	NORF	I	RF signal input from the RF signal decoder (IC622)
103	DFCT	O	Defect signal output to the RF signal decoder (IC622)
104	FWON	I	Control signal input from the RF signal decoder (IC622)
105	LOCK	I	FG reference clock signal input from the RF signal decoder (IC622)
106	ARPRST	O	Reset signal output to the RF signal decoder (IC622) “L”: reset
107	ARPINT	I	Interrupt signal input from the RF signal decoder (IC622)
108	ARPWT	I	Wait signal input from the RF signal decoder (IC622)
109	ARPWR	O	Write enable signal output to the RF signal decoder (IC622)

Pin No.	Pin Name	I/O	Description
110	$\overline{\text{ARPRD}}$	O	Read data output to the RF signal decoder (IC622)
111	$\overline{\text{ARPCS}}$	O	Chip select signal output to the RF signal decoder (IC622) “L”: active
112	$\overline{\text{XRAMOE}}$	O	Data enable signal output to the S-RAM (IC609) and ROM (IC632)
113	$\overline{\text{XRAMWE}}$	O	Data write enable signal output to the S-RAM (IC609)
114	$\overline{\text{SDPRST}}$	O	Reset signal output to the servo digital signal processor (IC607) “L”: reset
115	$\overline{\text{SDPINT}}$	I	Interrupt signal input from the servo digital signal processor (IC607)
116	$\overline{\text{SDPWR}}$	O	Data write strobe signal output to the servo digital signal processor (IC607)
117	$\overline{\text{SDPRD}}$	O	Data read strobe signal output to the servo digital signal processor (IC607)
118	$\overline{\text{SDPCS}}$	O	Chip select signal output to the servo digital signal processor (IC607) “L”: active
119	NC	—	Not used (open)
120	VDD	—	Power supply terminal (+3.3V)
121, 122	GND	—	Ground terminal
123	NC	—	Not used (open)
124	RAMUB	O	Upper byte write enable signal output to the S-RAM (IC609)
125	RAMLB	O	Low byte write enable signal output to the S-RAM (IC609)
126 to 133	HD7 to HD0	I/O	Two-way data bus with the system controller (IC605), S-RAM (IC609), RF signal decoder (IC622), and ROM (IC632)
134	GND	—	Ground terminal
135	CPUCK	I	Clock signal input from the system controller (IC605)
136	GND	—	Ground terminal
137	HDAK1IN	I	Not used (fixed at “H”)
138	HDAK0IN	I	Not used (fixed at “H”)
139	HDRQ1OUT	O	Not used (open)
140	HDRQ0OUT	O	Not used (open)
141	$\overline{\text{CS1}}$	I	Chip select signal output to the system controller (IC605) “L”: active
142	$\overline{\text{CS4}}$	I	Chip select signal output to the system controller (IC605) “L”: active
143	$\overline{\text{LWR}}$	I	Write strobe 1 signal output to the system controller (IC605)
144	$\overline{\text{HWR}}$	I	Write strobe 0 signal output to the system controller (IC605)
145	$\overline{\text{HRD}}$	I	Read strobe signal output to the system controller (IC605)
146 to 154	HA19 to HA18, HA5 to HA0	I	Address signal output to the system controller (IC605)
155	XINT3	O	Interrupt signal 3 output to the system controller (IC605)
156	XINT1	O	Interrupt signal 1 output to the system controller (IC605)
157	$\overline{\text{WAIT}}$	O	Wait signal output to the system controller (IC605)
158	NC	—	Not used (open)
159, 160	GND	—	Ground terminal

• MAIN BOARD IC617 CXD2751Q (DSD DECODER)

Pin No.	Pin Name	I/O	Description
1	XSRQ	O	Data request signal output to the RF signal decoder (IC622)
2	XSHD	I	Header flag signal input from the RF signal decoder (IC622)
3	VDD	—	Power supply terminal (+3.3V)
4	VSS	—	Ground terminal
5	SDCK	I	Serial data clock signal input from the RF signal decoder (IC622)
6	SMUTE	I	Muting signal input from the system controller (IC605) “L”: muting
7	XMSLAT	I	Latch signal input from the system controller (IC605)
8	MSCK	I	Clock signal input from the system controller (IC605)
9	MSDATI	I	Serial data input from the system controller (IC605)
10	MSDATO	O	Serial data output to the system controller (IC605)
11	MSREDY	O	Ready signal input from the system controller (IC605) “L”: ready
12	XMSDOE	O	Data enable signal output terminal Not used (open)
13	XRST	I	Reset signal input from the expander (IC612)
14	MCKI	I	Master clock signal input terminal
15	VSS	—	Ground terminal
16	CK75S	I	Master clock select signal input terminal “L”: 512fs, “H”: 768fs (fixed at “H” in this set)
17	EXCKO1	O	External clock 1 signal output terminal Not used (open)
18	EXCKO2	O	External clock 2 signal output terminal Not used (open)
19	LRCK	I/O	Clock signal input/output terminal (44.1kHz) Not used (open)
20	NC	—	Not used (open)
21	MNT2	O	Monitor 2 signal output terminal Not used (open)
22	TRST	I	Reset signal input from the expander (IC612) “L”: reset
23	TCK	I	Clock signal input terminal for test (normally: fixed at “L”)
24	TDI	I	Data input terminal for test (normally: open)
25	TENA1	I	Data enable signal input terminal for test (normally: open)
26	TDO	O	Data output terminal for test (normally: open)
27	VST	—	Ground terminal for test (normally: fixed at “L”)
28	VDD	—	Power supply terminal (+3.3V)
29	VSS	—	Ground terminal
30	MNT1	O	Monitor 1 signal output terminal Not used (open)
31	MNT0	O	Monitor 0 signal output terminal Not used (open)
32	XBIT	O	Monitor signal output terminal Not used (open)
33	F75HZ	O	Clock output terminal (75Hz) Not used (open)
34	SUPDAT	O	Serial data output terminal Not used (open)
35	XSUPAK	O	Data flag signal output terminal Not used (open)
36	SUPEN	O	Data enable signal output terminal Not used (open)
37	TEST1	I	Test 1 signal input terminal for test (normally: fixed at “L”)
38	VSS	—	Ground terminal
39	TEST2	I	Test 2 signal input terminal for test (normally: fixed at “L”)
40, 41	VSS	—	Ground terminal
42	BCKD	I	Phase reference signal input terminal
43 to 45	NC	—	Not used (open)
46	BCKA	I	Shift clock signal input terminal
47	DSAL	O	DSD data (Lch) output terminal
48	DSAR	O	DSD data (Rch) output terminal
49	ZDFLGL	O	Data (Lch) flag detect signal output terminal

Pin No.	Pin Name	I/O	Description
50	ZDFLGR	O	Data (Rch) flag detect signal output terminal
51, 52	A0, A1	O	Address signal output to the D-RAM (IC625)
53	VDD	—	Power supply terminal (+3.3V)
54	VSS	—	Ground terminal
55 to 63	A2 to A10	O	Address signal output to the D-RAM (IC625)
64	NC	—	Not used (open)
65	VSS	—	Ground terminal
66	XWE	O	Write enable signal output to the D-RAM (IC625)
67	XCAS	O	Column address strobe signal output to the D-RAM (IC625)
68	XRAS	O	Row address strobe signal output to the D-RAM (IC625)
69	XOE	O	Read enable signal output to the D-RAM (IC625)
70 to 77	DQ0 to DR7	I/O	Two-way data bus with the D-RAM (IC625)
78	VDD	—	Power supply terminal (+3.3V)
79	VSS	—	Ground terminal
80	WCK	I	Clock signal input terminal for disk mark detect
81	WRFD	I	RF data signal input terminal for disk mark detect
82 to 89	WAD0 to WAD7	I	A/D data signal input from the A/D converter (IC620) for disk mark detect
90	VSS	—	Ground terminal
91 to 98	SD7 to SD0	I	Stream data signal input from the RF signal decoder (IC622)
99	SDEF	I	Error flag signal input from the RF signal decoder (IC622)
100	XSAK	I	Data flag signal input from the RF signal decoder (IC622)

REVISION HISTORY

Clicking the version allows you to jump to the revised page.

Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

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